T0N090 "E9ZE2860

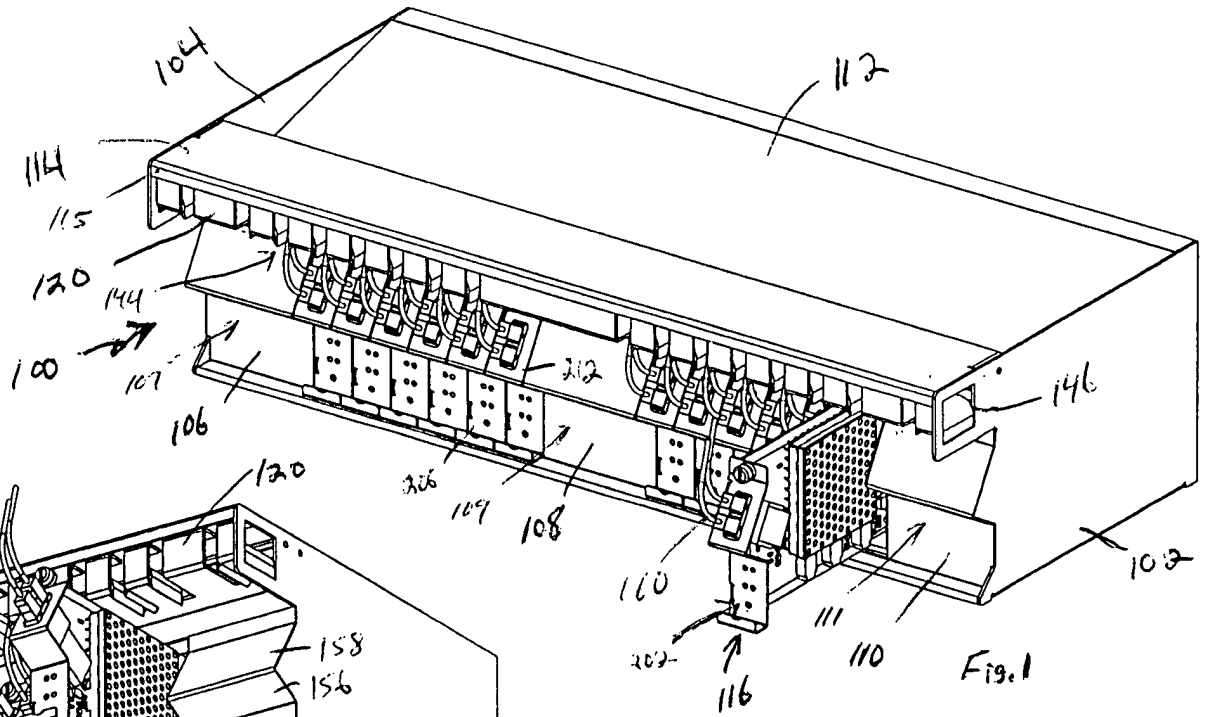

Fig. 1

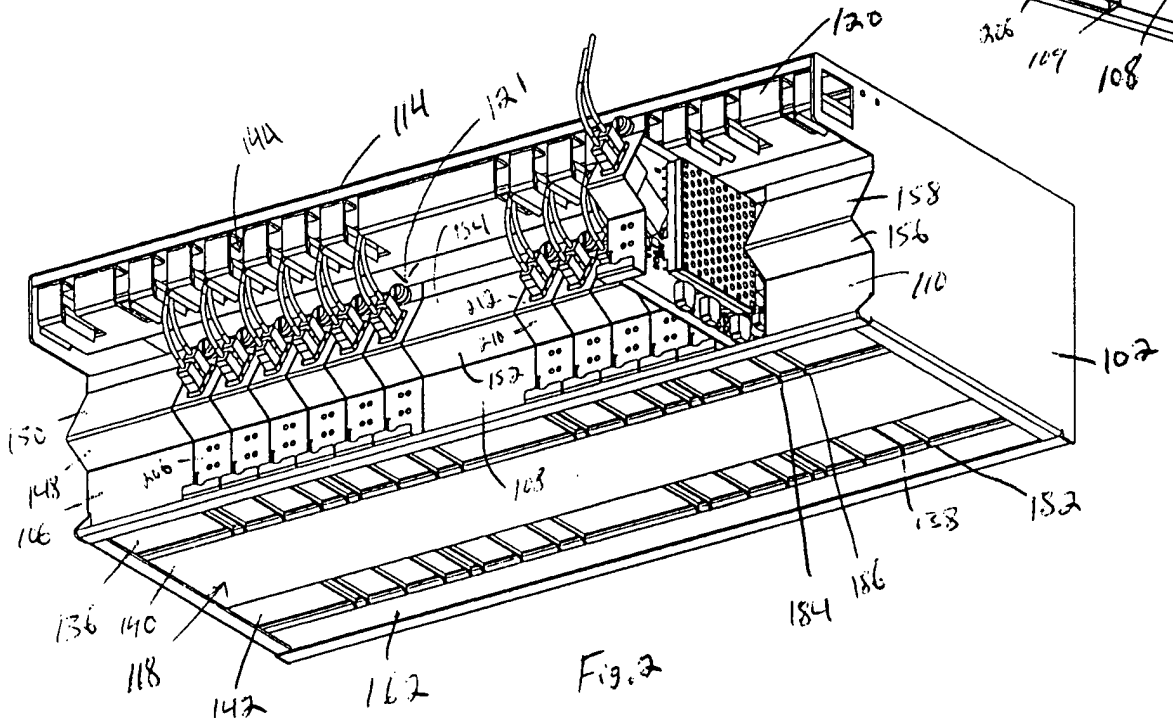

Fig. 2

TOM090 "E9ZE2860

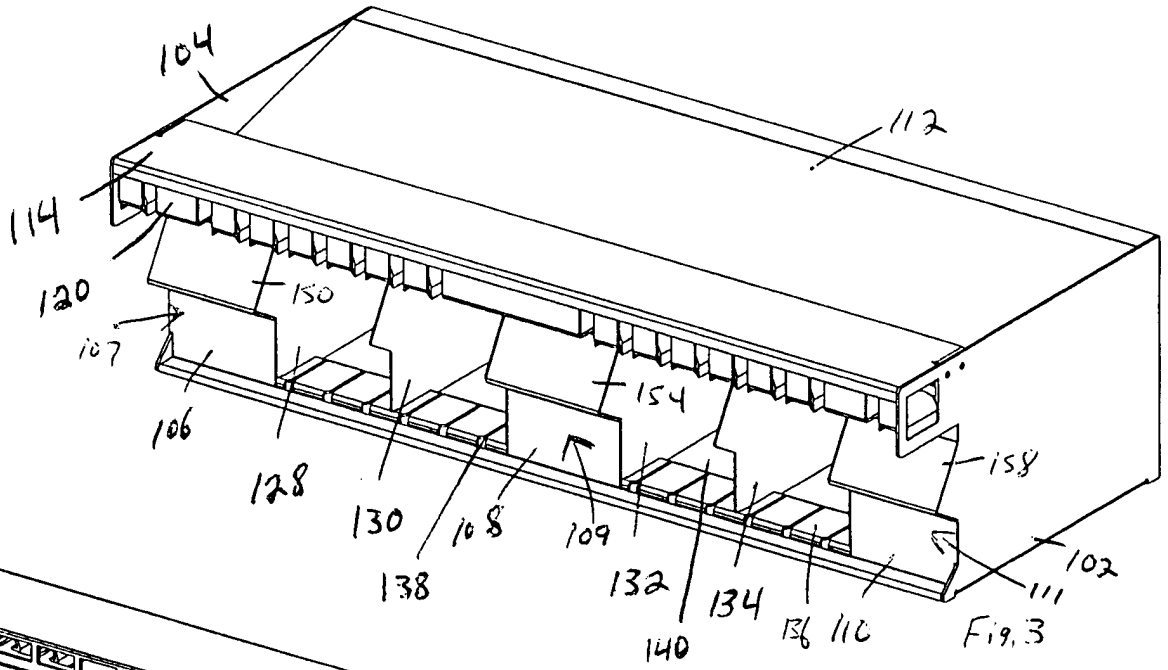

Fig. 3

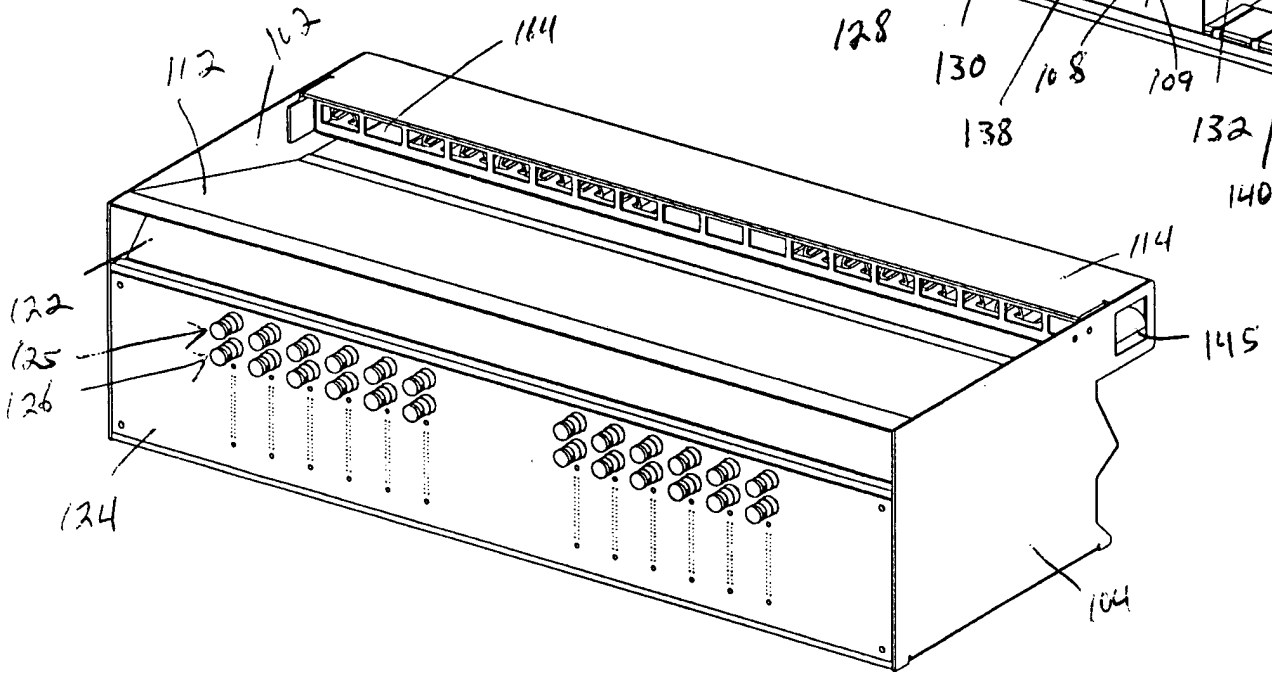

Fig. 4

T0h090" 6926860

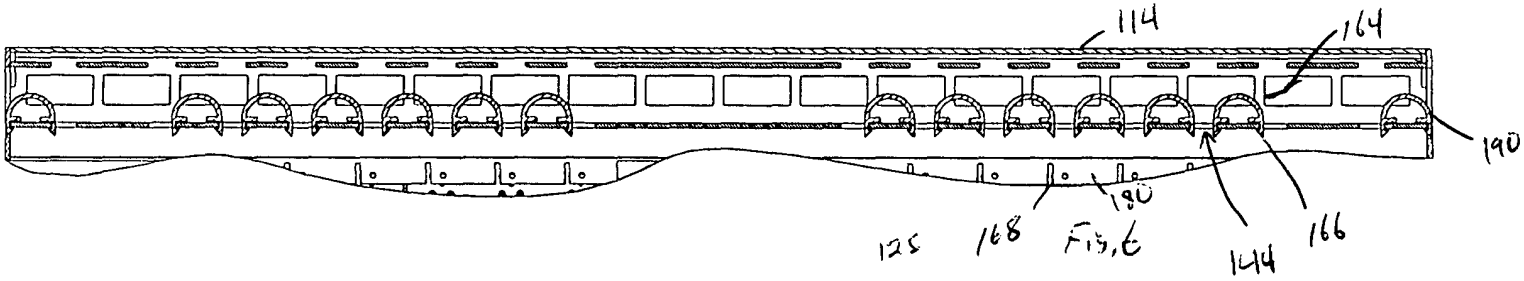

Fig. 6

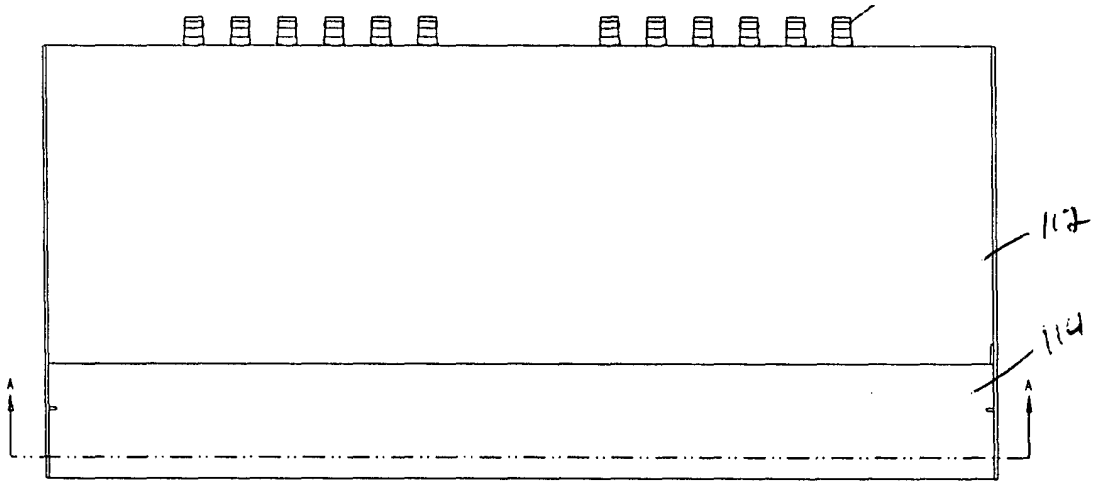

Fig. 5

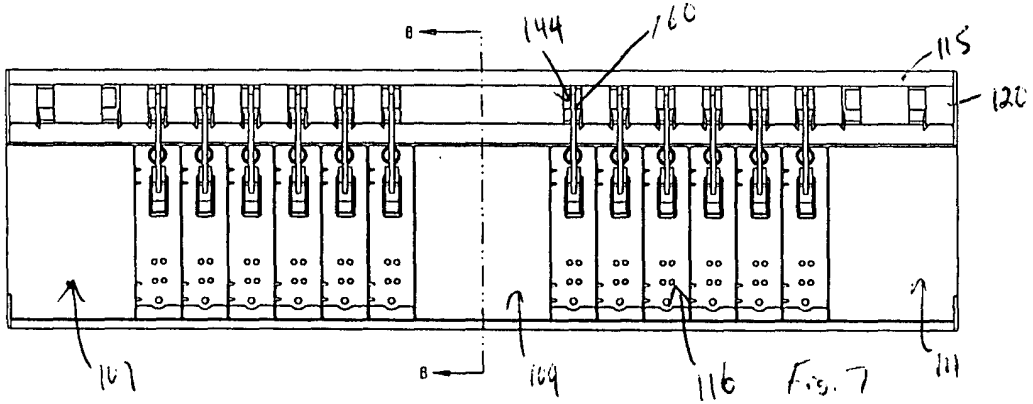

Fig. 7

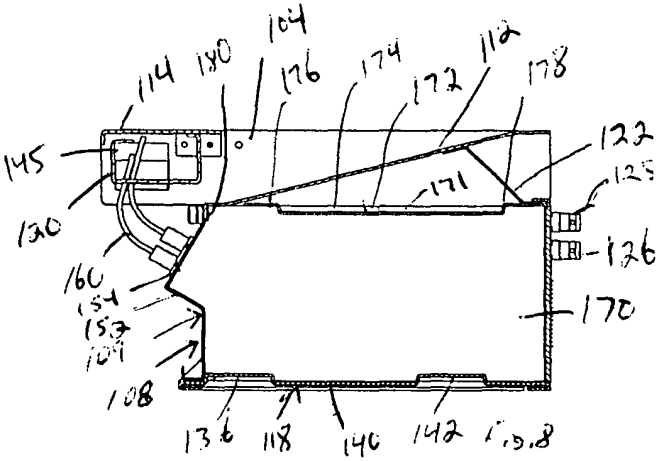

Fig. 8

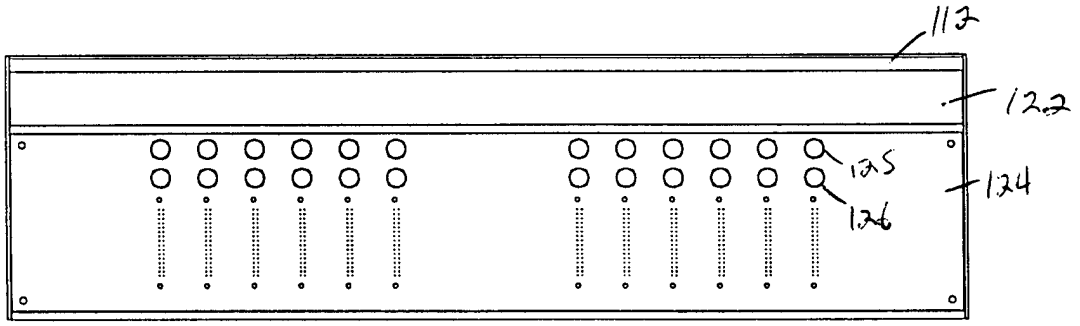
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Fig. 10

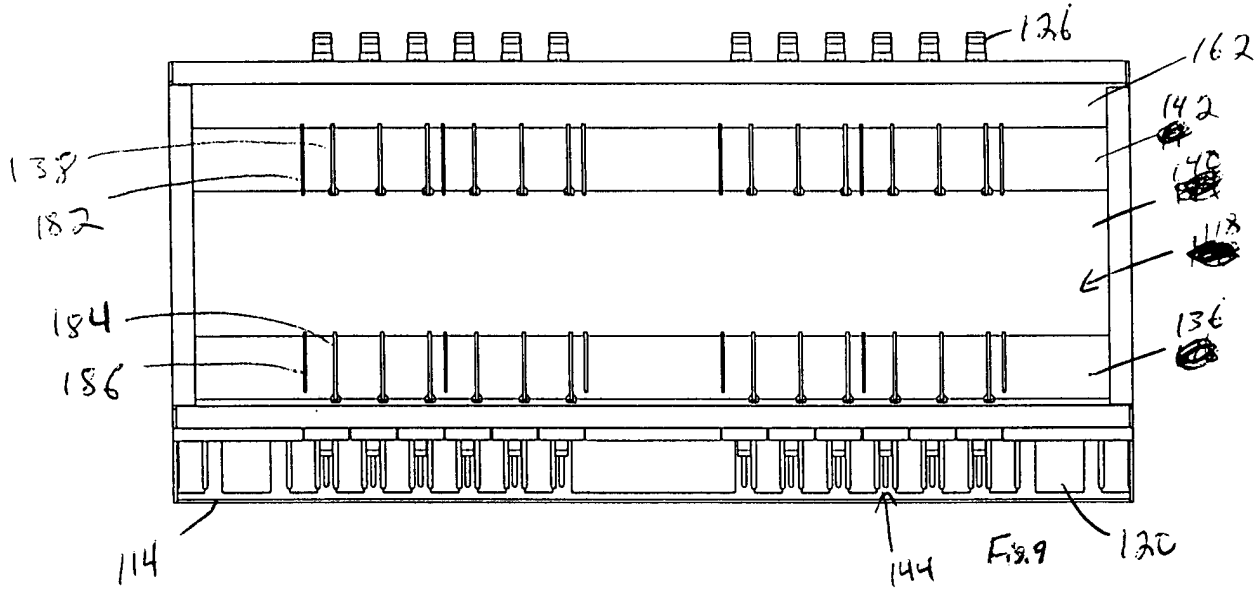
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Fig. 9

T0T0590" E9LEZ860

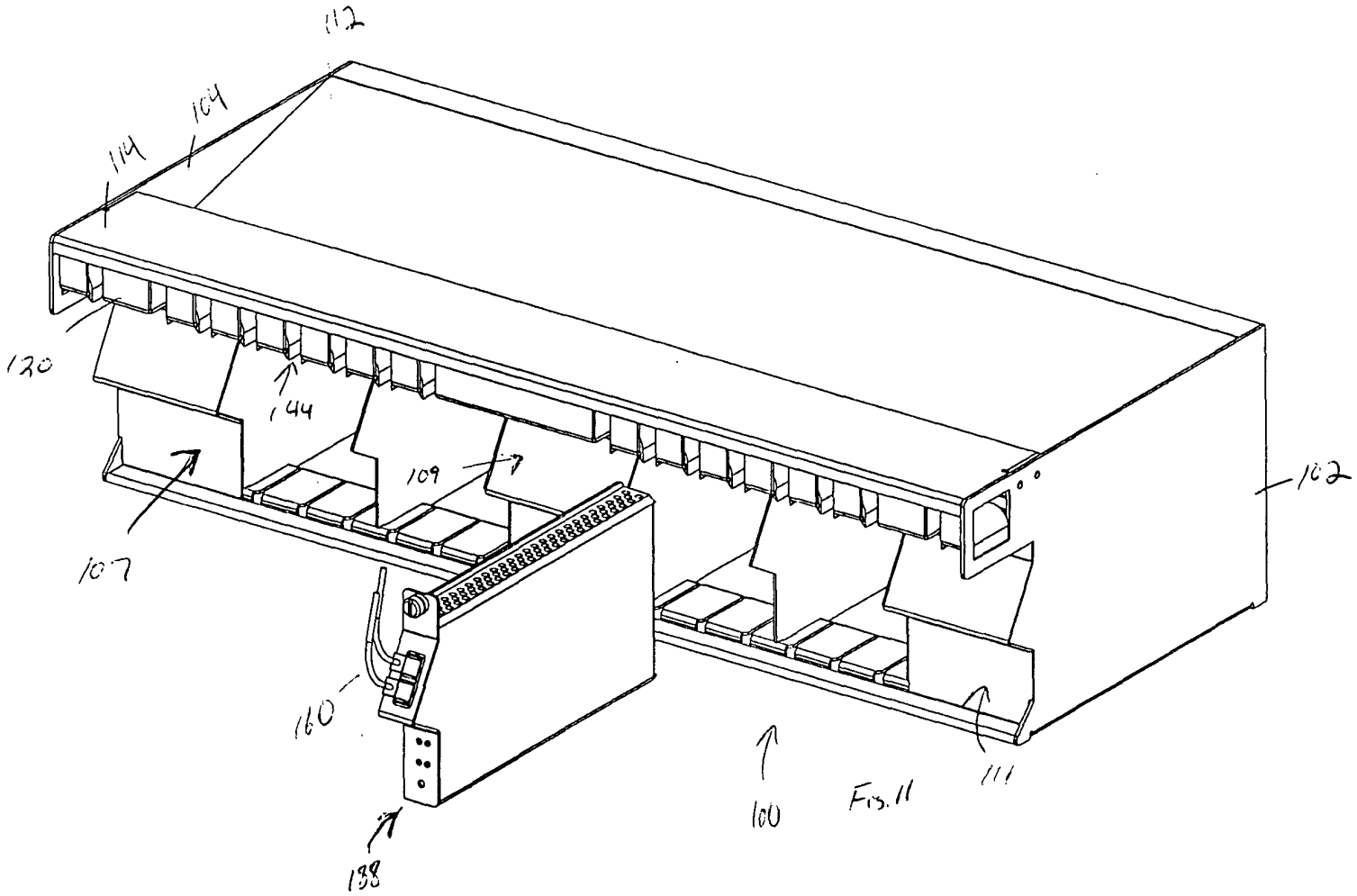


Fig. 11

TOMOSO" E92E280

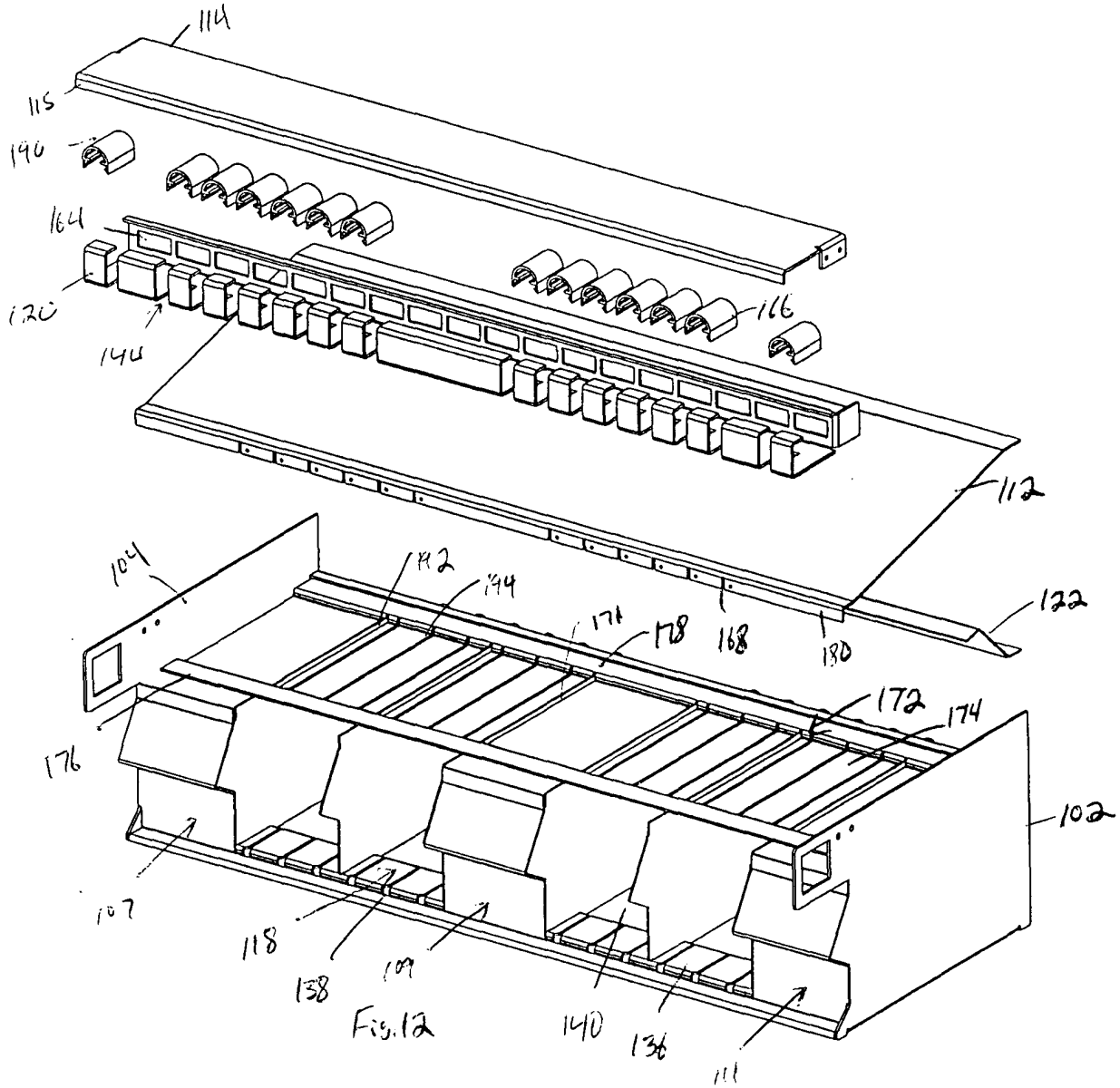


Fig. 12

T0T0S30" E9ZE78E0

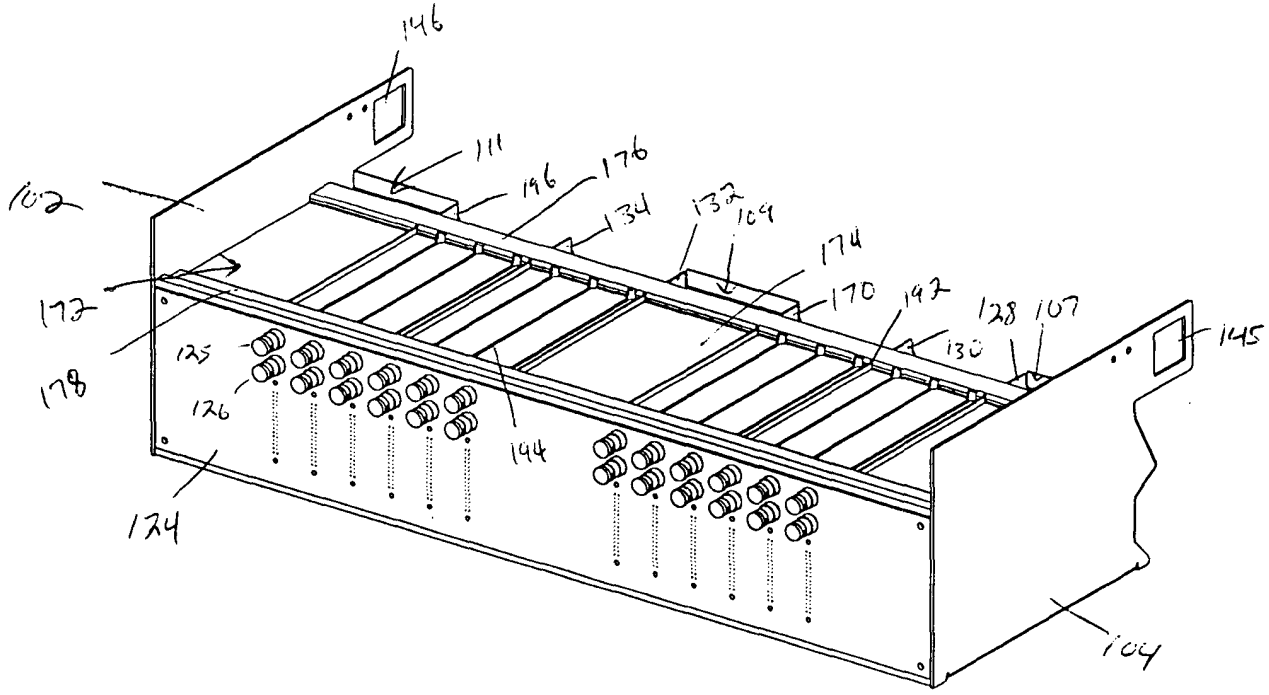


Fig. 13

TOM090 E9.2E2860

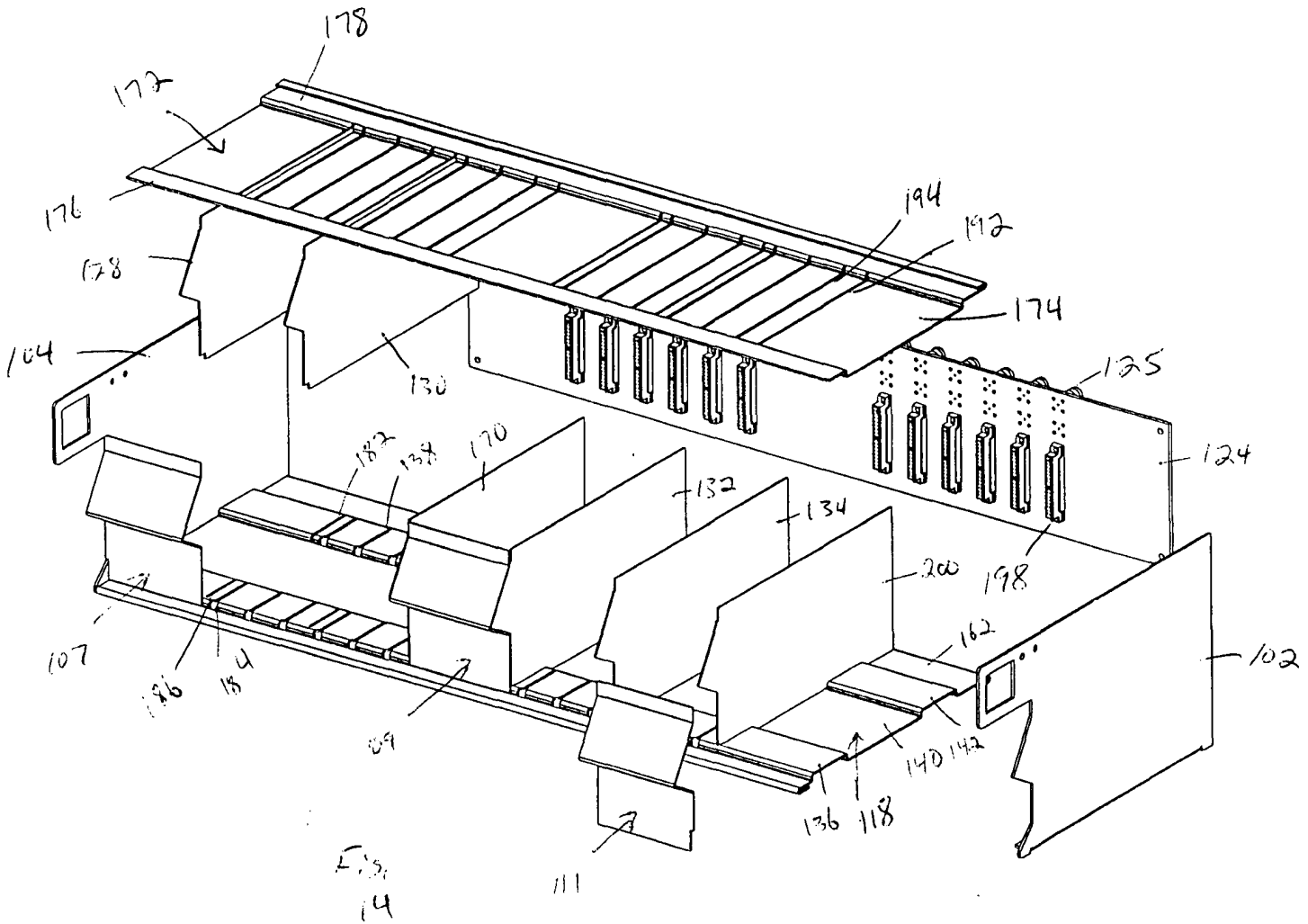


Fig. 14

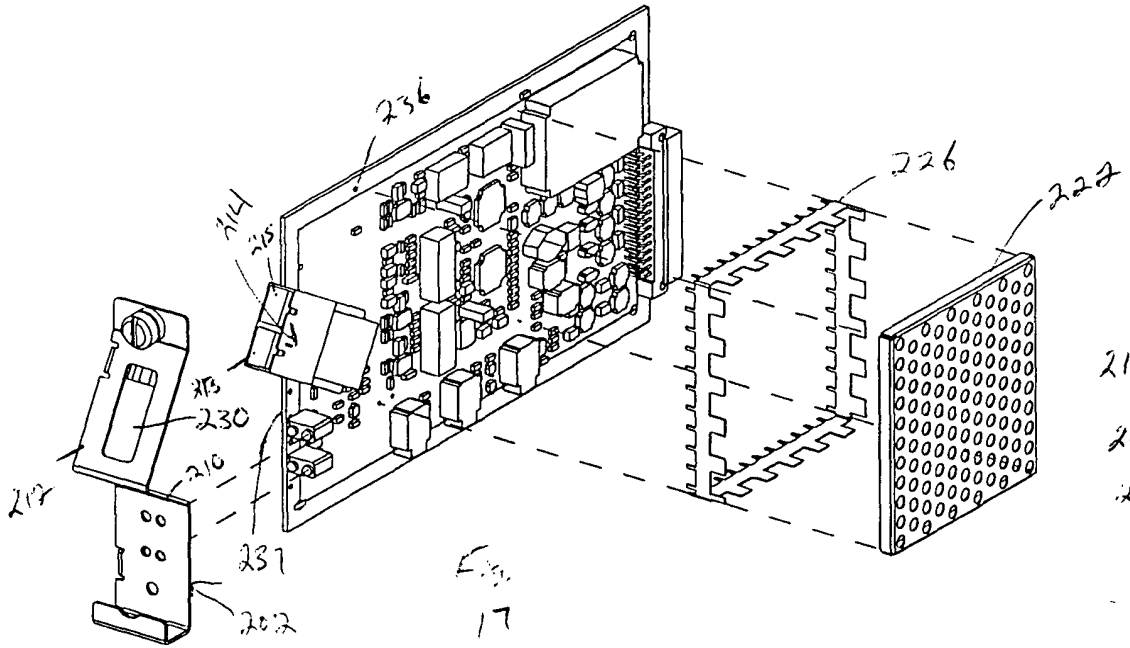


Fig. 17

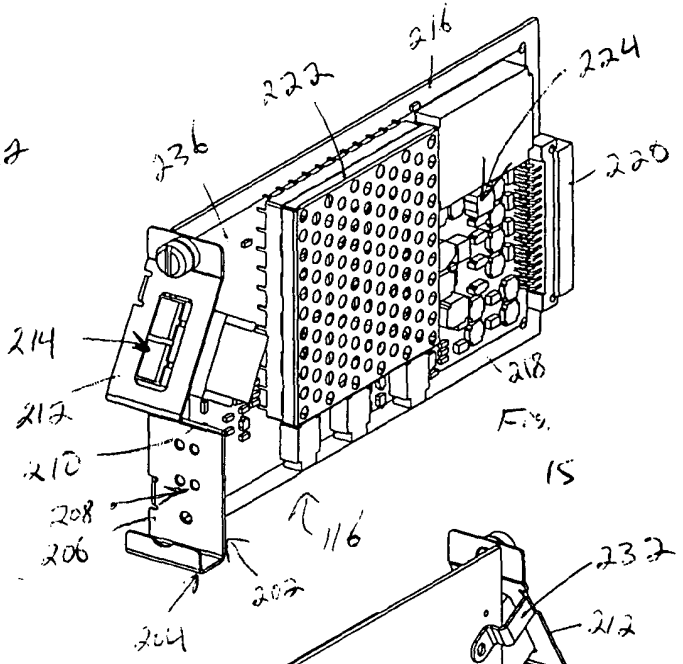


Fig. 15

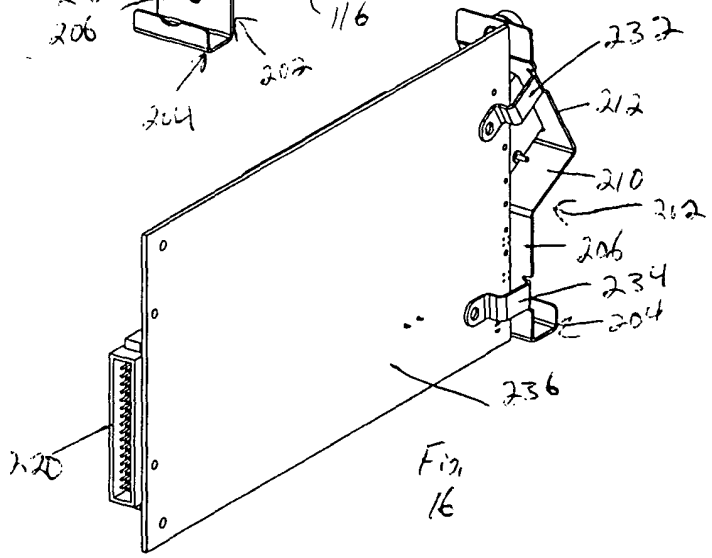


Fig. 16

TOMOSO "E9726860

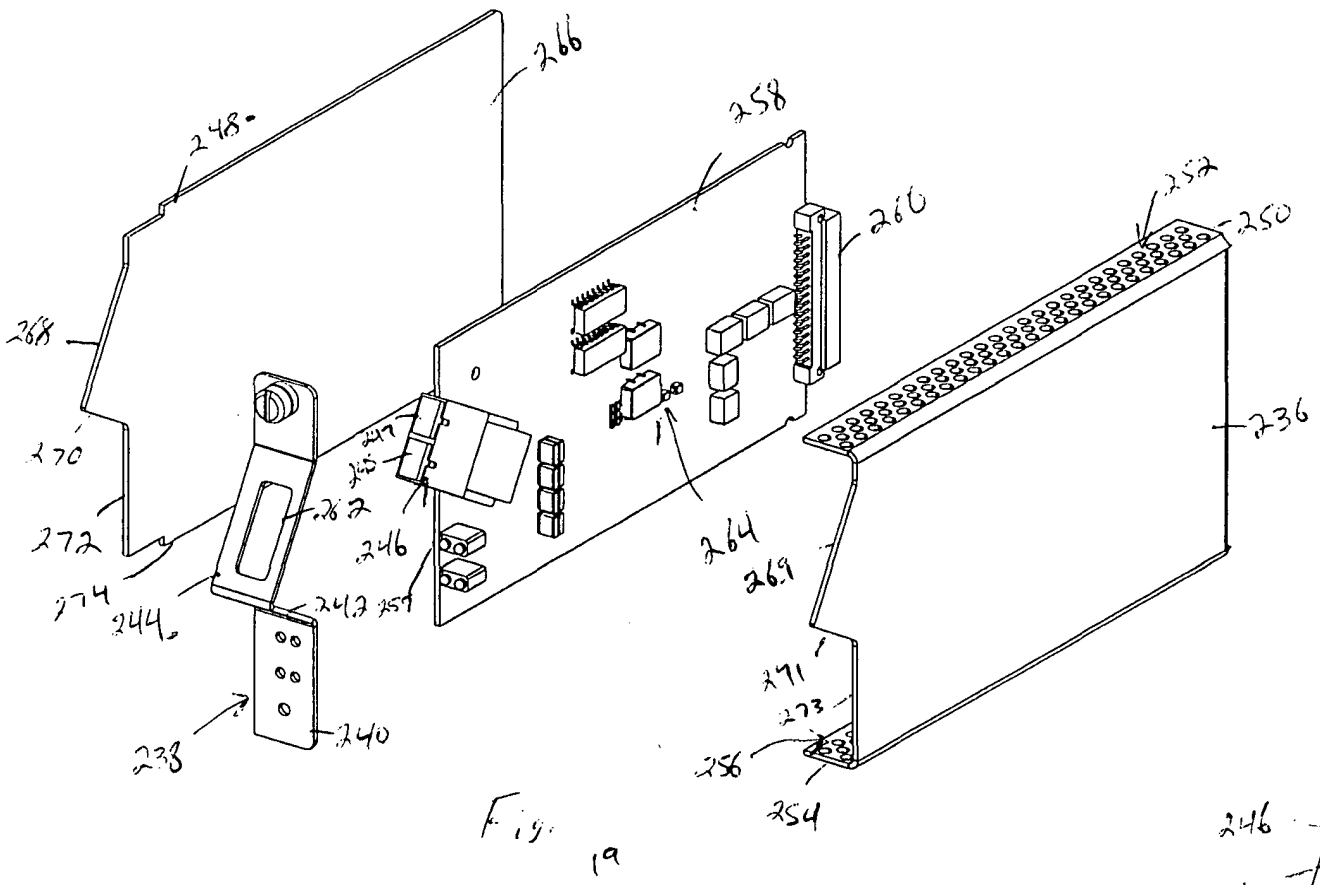


Fig. 19

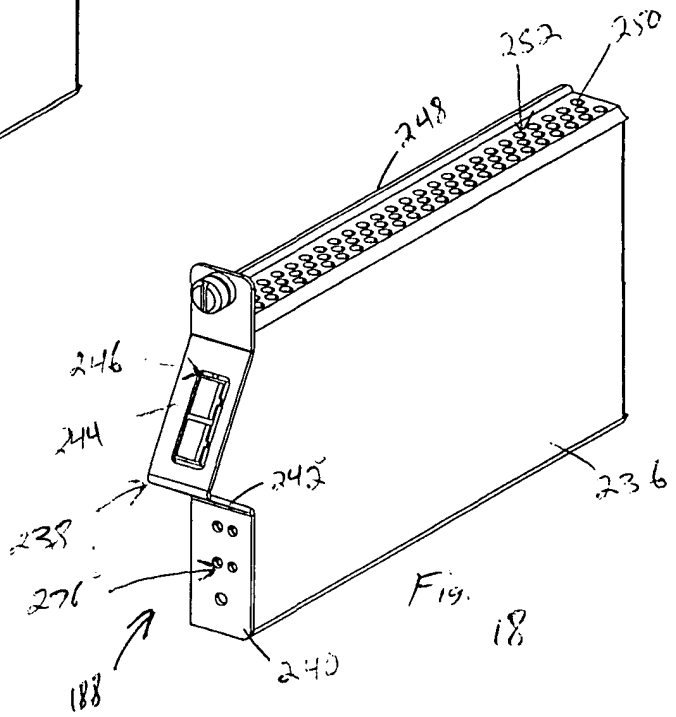
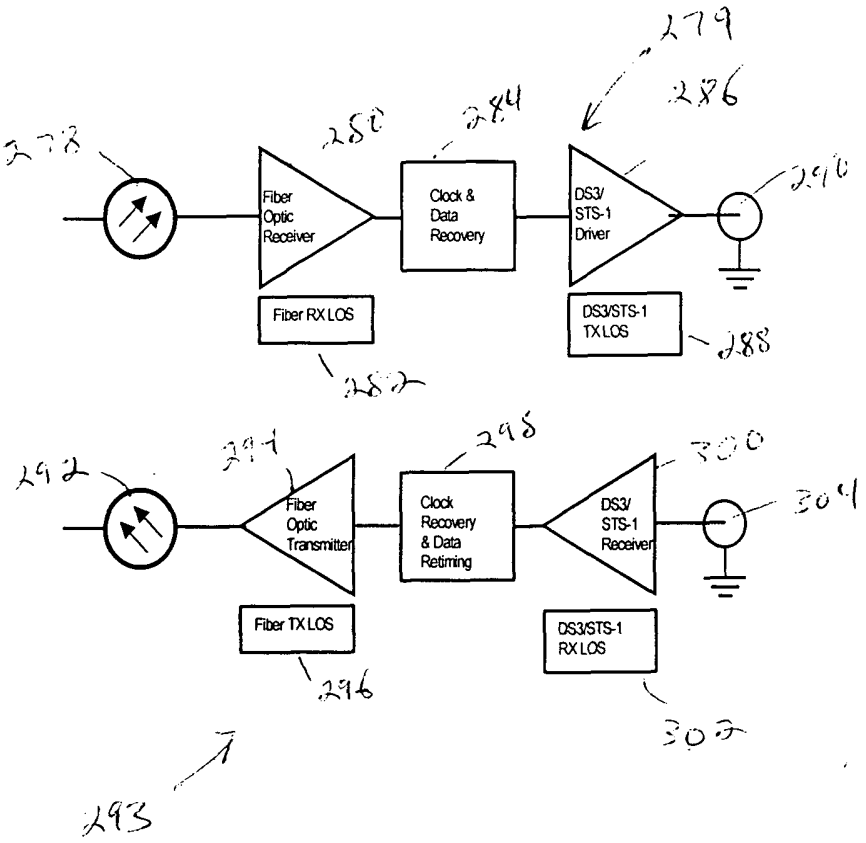


Fig. 18


278
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296
Fiber Optic Receiver
Clock & Data Recovery
DS3/ STS-1 Driver
Fiber RX LOS
DS3/STS-1 TX LOS
282
288
292
294
298
300
304
Fiber Optic Transmitter
Clock Recovery & Data Retiming
DS3/ STS-1 Receiver
Fiber TX LOS
DS3/STS-1 RX LOS
296
302
293

FIG. 20

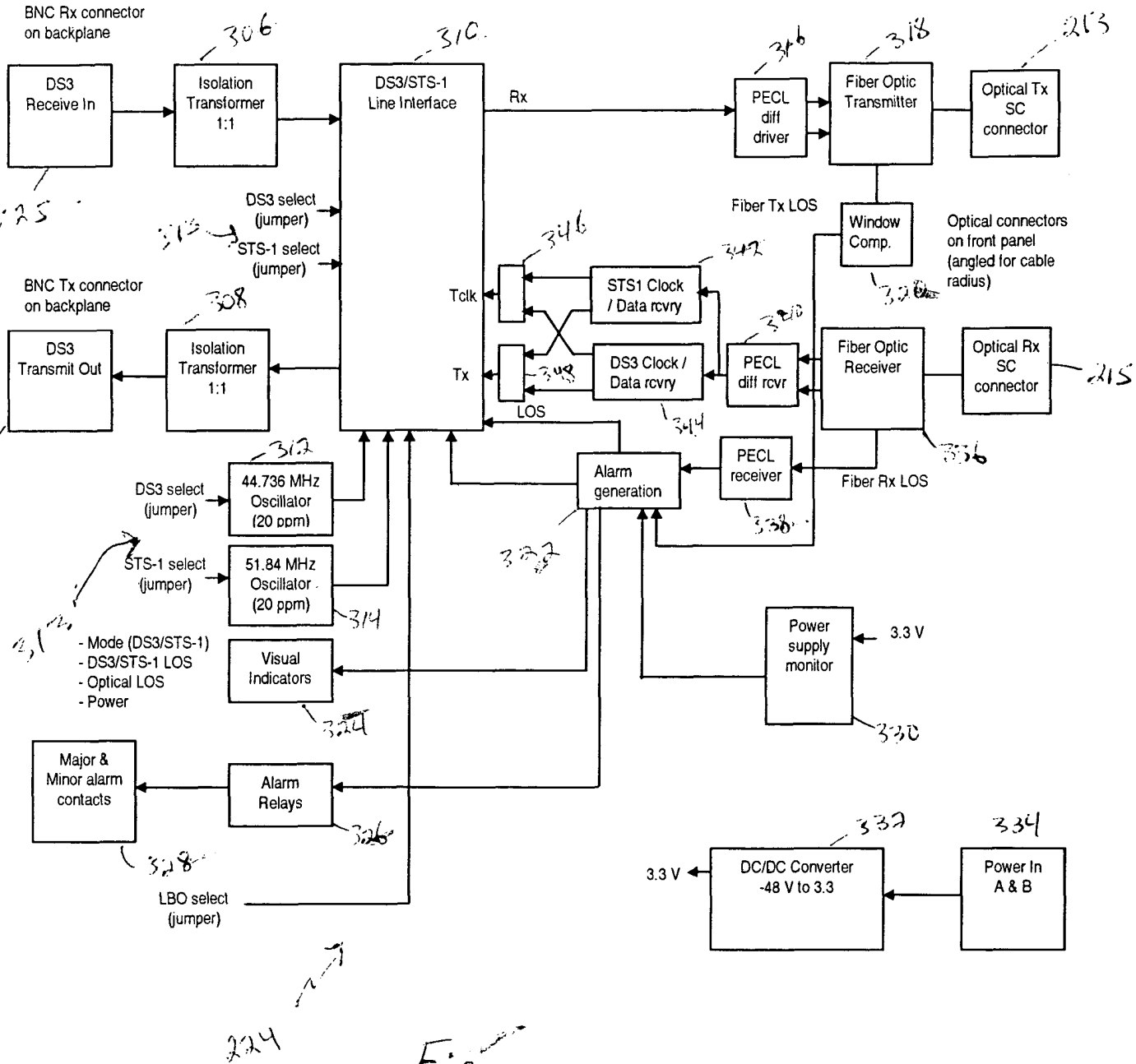

BNC Rx connector on backplane
DS3 Receive In
Isolation Transformer 1:1
DS3/STS-1 Line Interface
Rx
PECL diff driver
Fiber Optic Transmitter
Optical Tx SC connector
DS3 select (jumper)
STS-1 select (jumper)
Fiber Tx LOS
Window Comp.
Optical connectors on front panel (angled for cable radius)
BNC Tx connector on backplane
Tclk
STS1 Clock / Data rcvry
DS3 Transmit Out
Isolation Transformer 1:1
Tx
DS3 Clock / Data rcvry
PECL diff rcvr
Fiber Optic Receiver
Optical Rx SC connector
LOS
DS3 select (jumper)
44.736 MHz Oscillator (20 ppm)
Alarm generation
PECL receiver
Fiber Rx LOS
STS-1 select (jumper)
51.84 MHz Oscillator (20 ppm)
- Mode (DS3/STS-1)
- DS3/STS-1 LOS
- Optical LOS
- Power
Visual Indicators
Power supply monitor
3.3 V
Major & Minor alarm contacts
Alarm Relays
LBO select (jumper)
3.3 V
DC/DC Converter -48 V to 3.3
Power In A & B

Fig. 2

TOM090 EP2262360

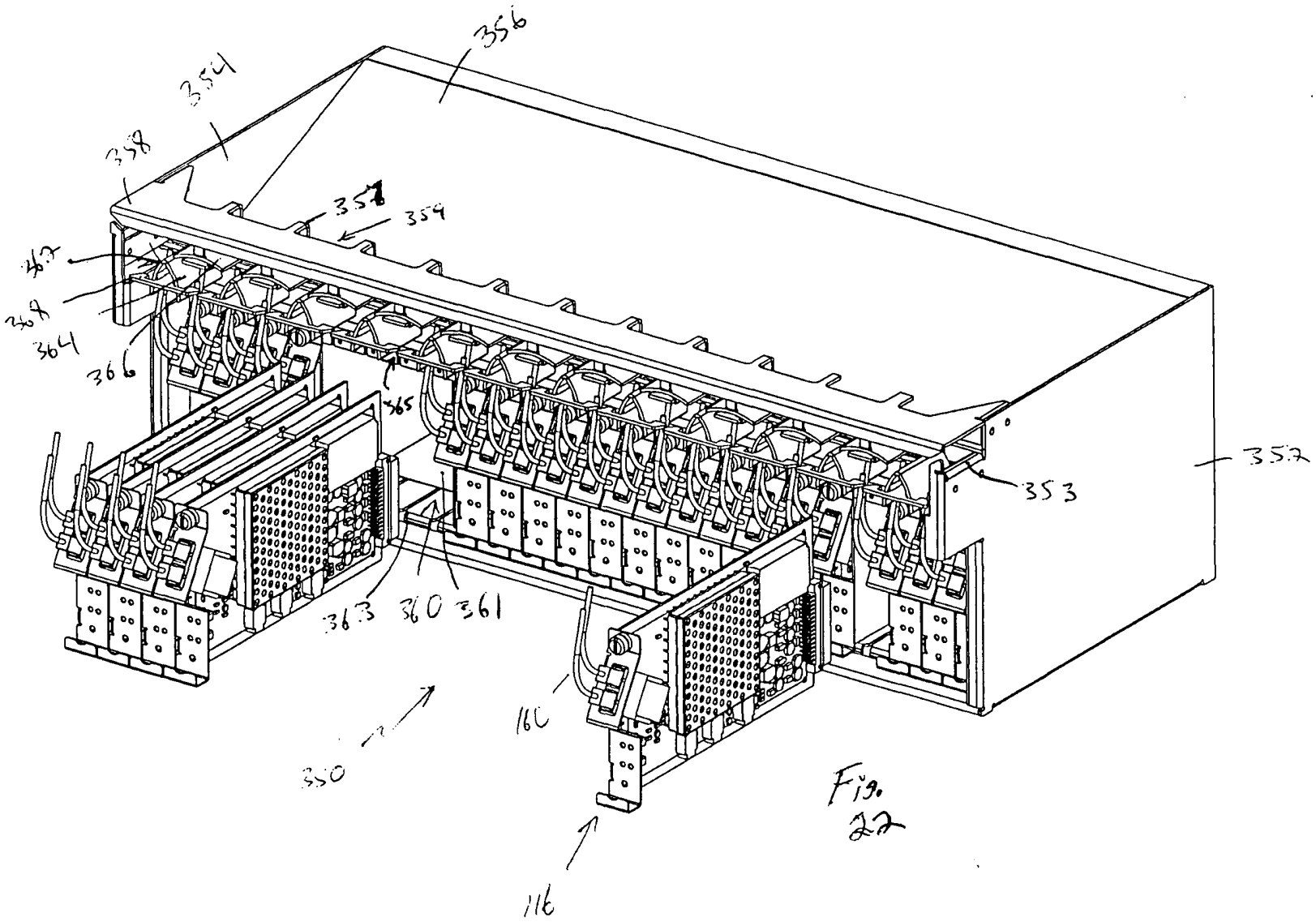


Fig. 22

T0h090" E9ZE7860

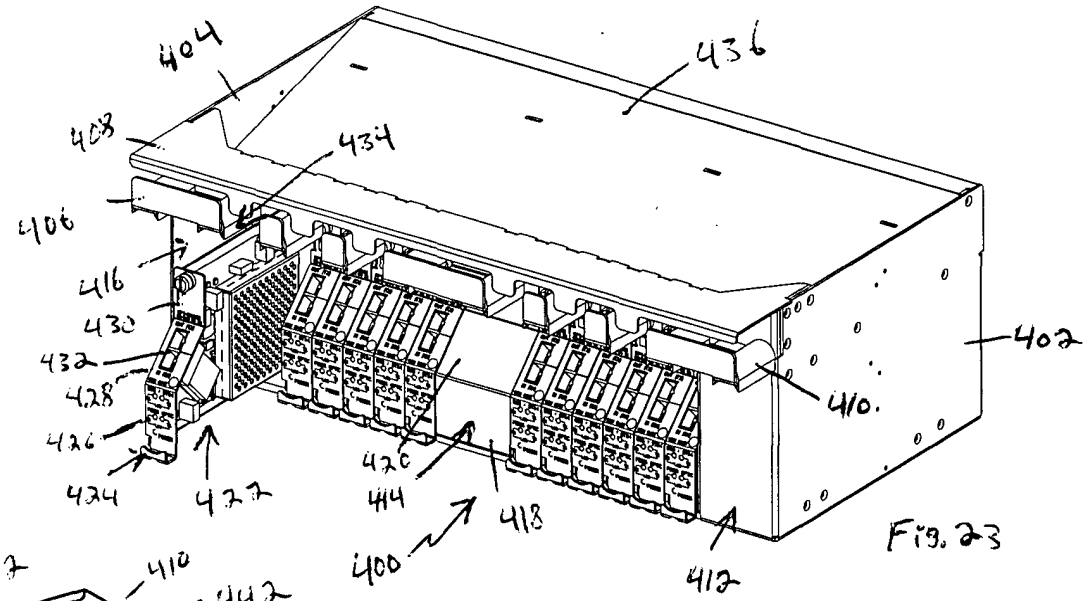


Fig. 23

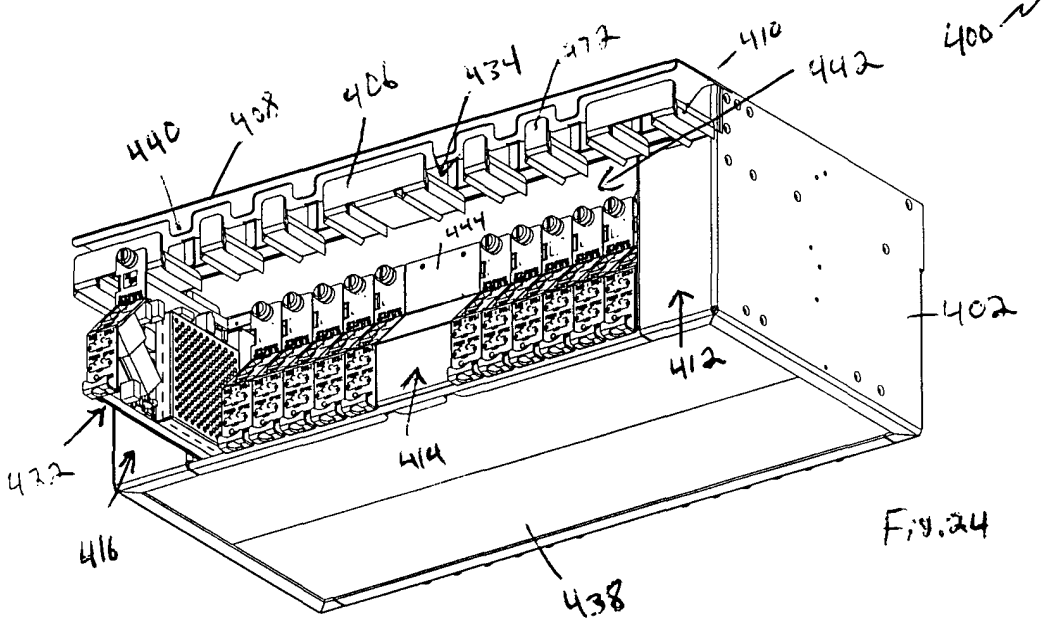


Fig. 24

TOMOSO "E9ZEZ980

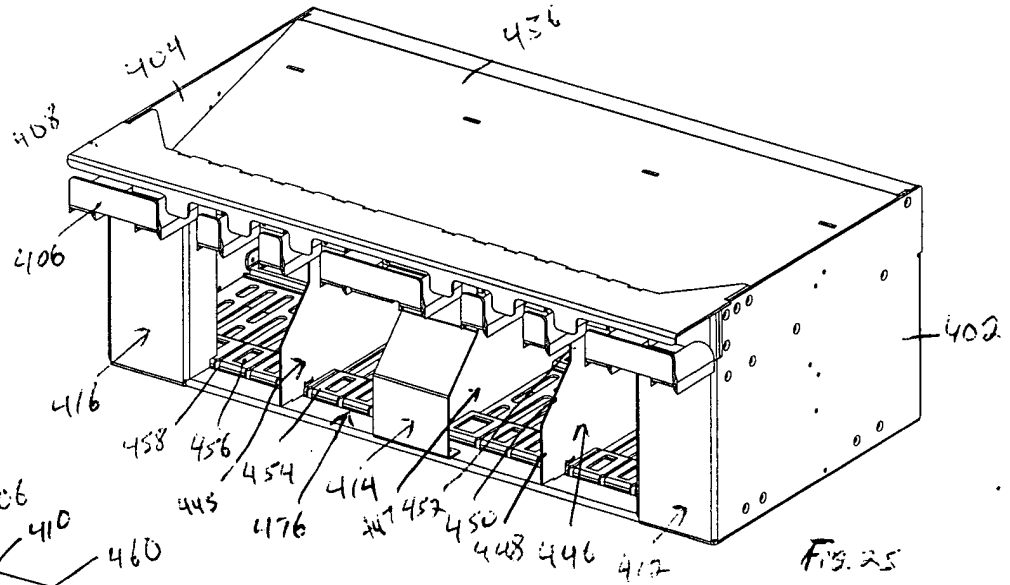


Fig. 25

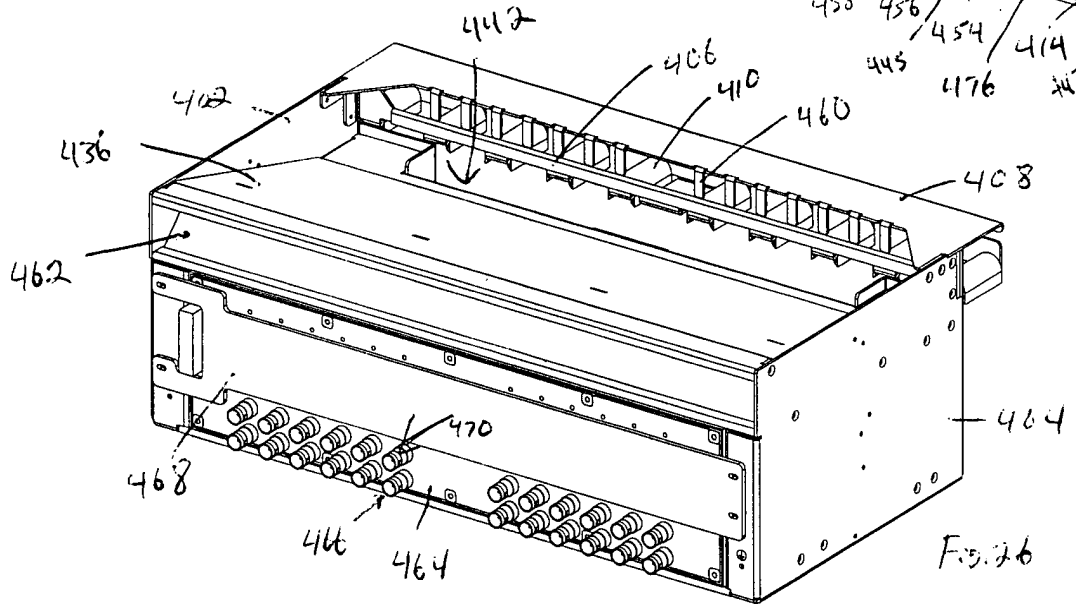


Fig. 26

TOMOSO "E9282860

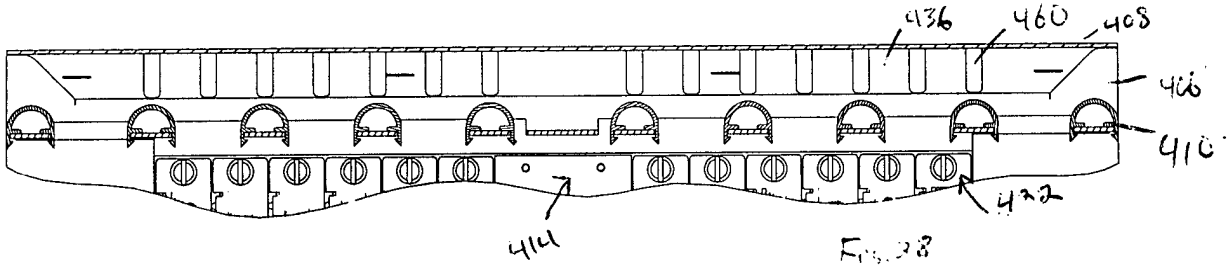


Fig. 28

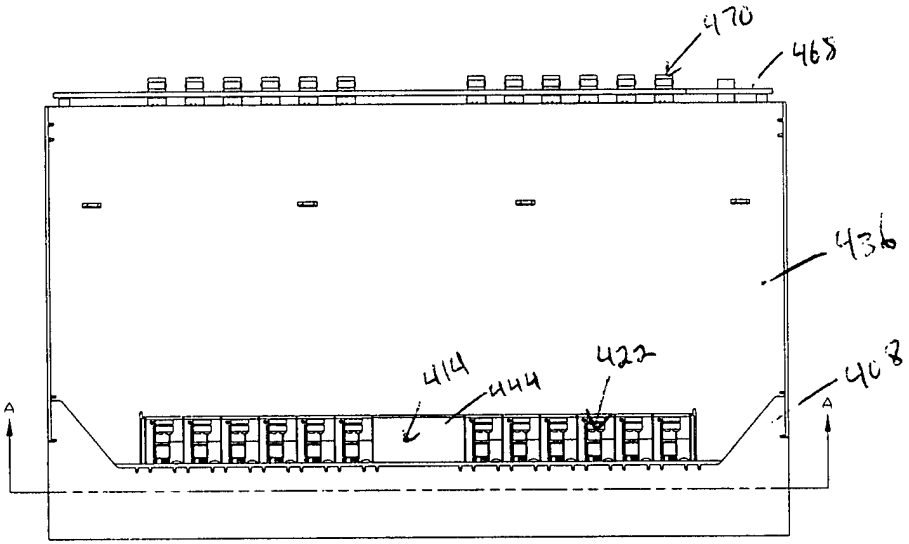


Fig. 27

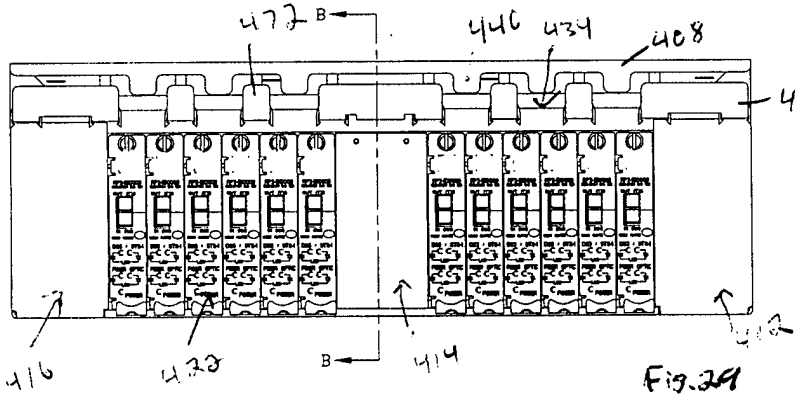


Fig. 29

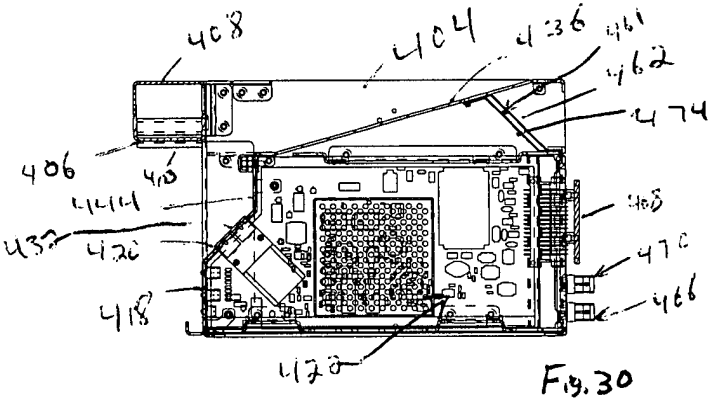


Fig. 30

TOMOSO "E9ZE78G0

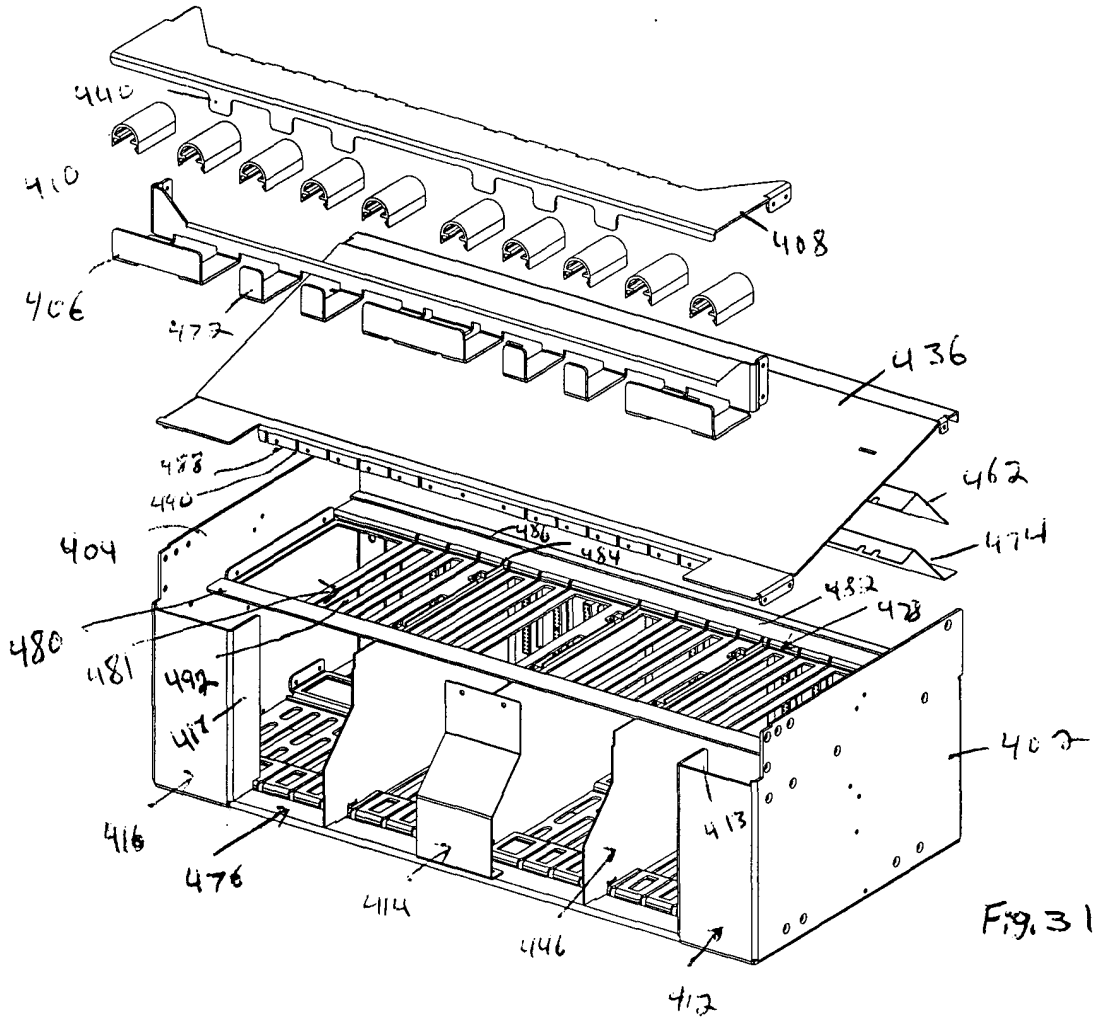


Fig. 31

TOMO90 "E9262860

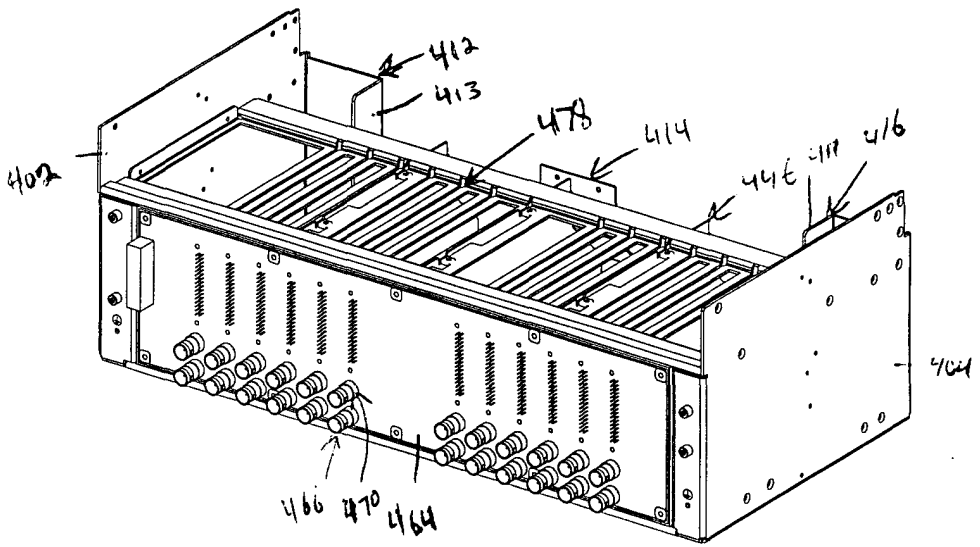


Fig. 32

TOM090 "E92E2860

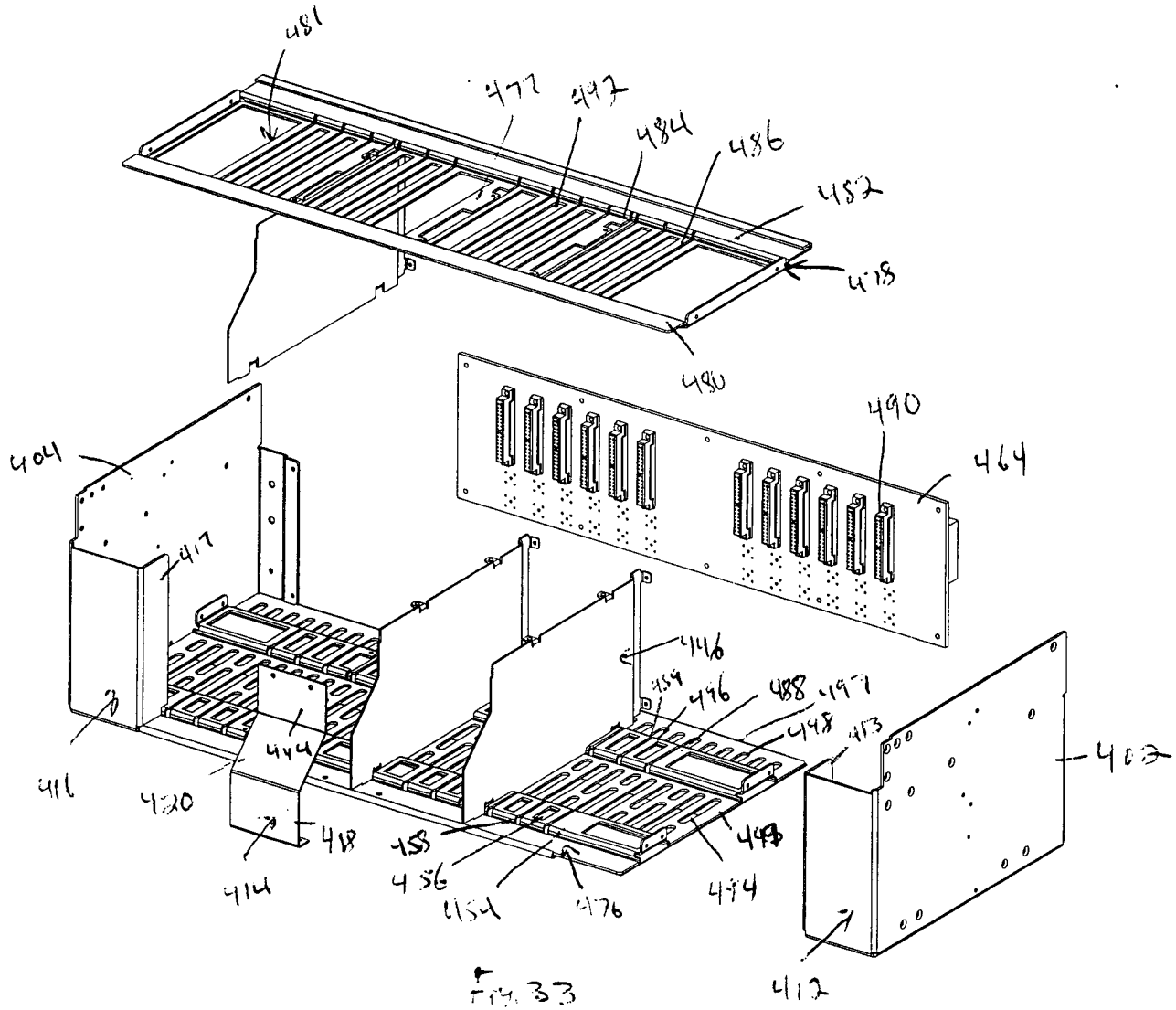


Fig. 33

TOM090 "E9726860

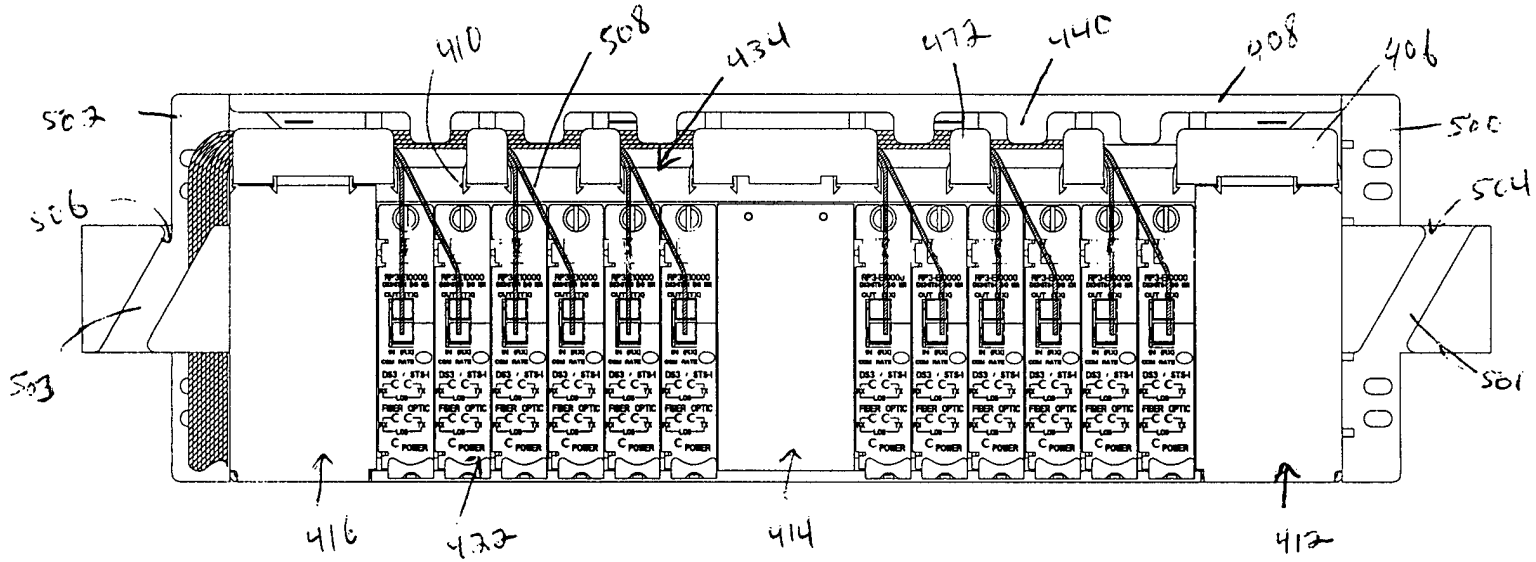


Fig. 3C

T0h090 E9ZEZ860

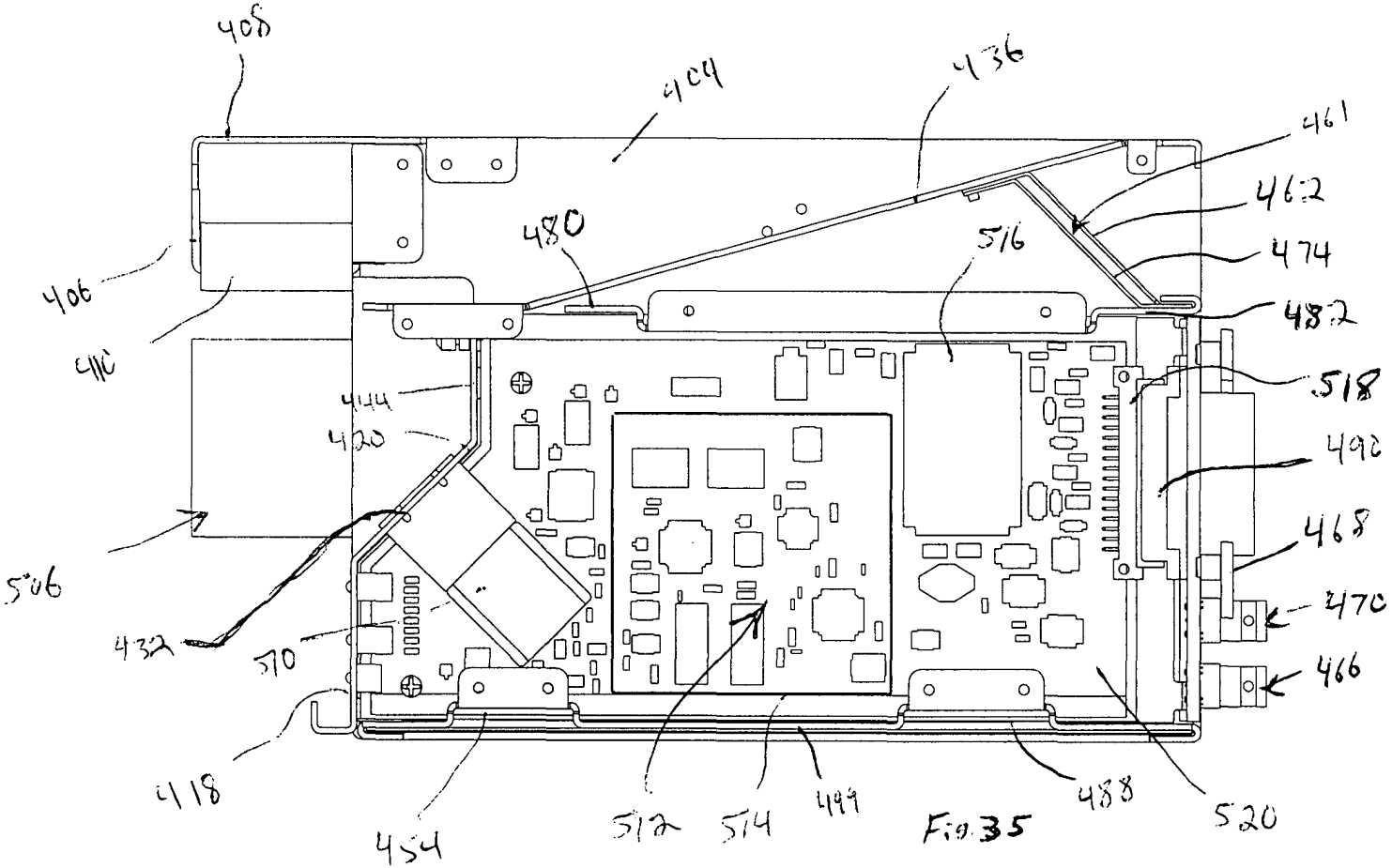


Fig. 35

TOMOSO" E9Z62860

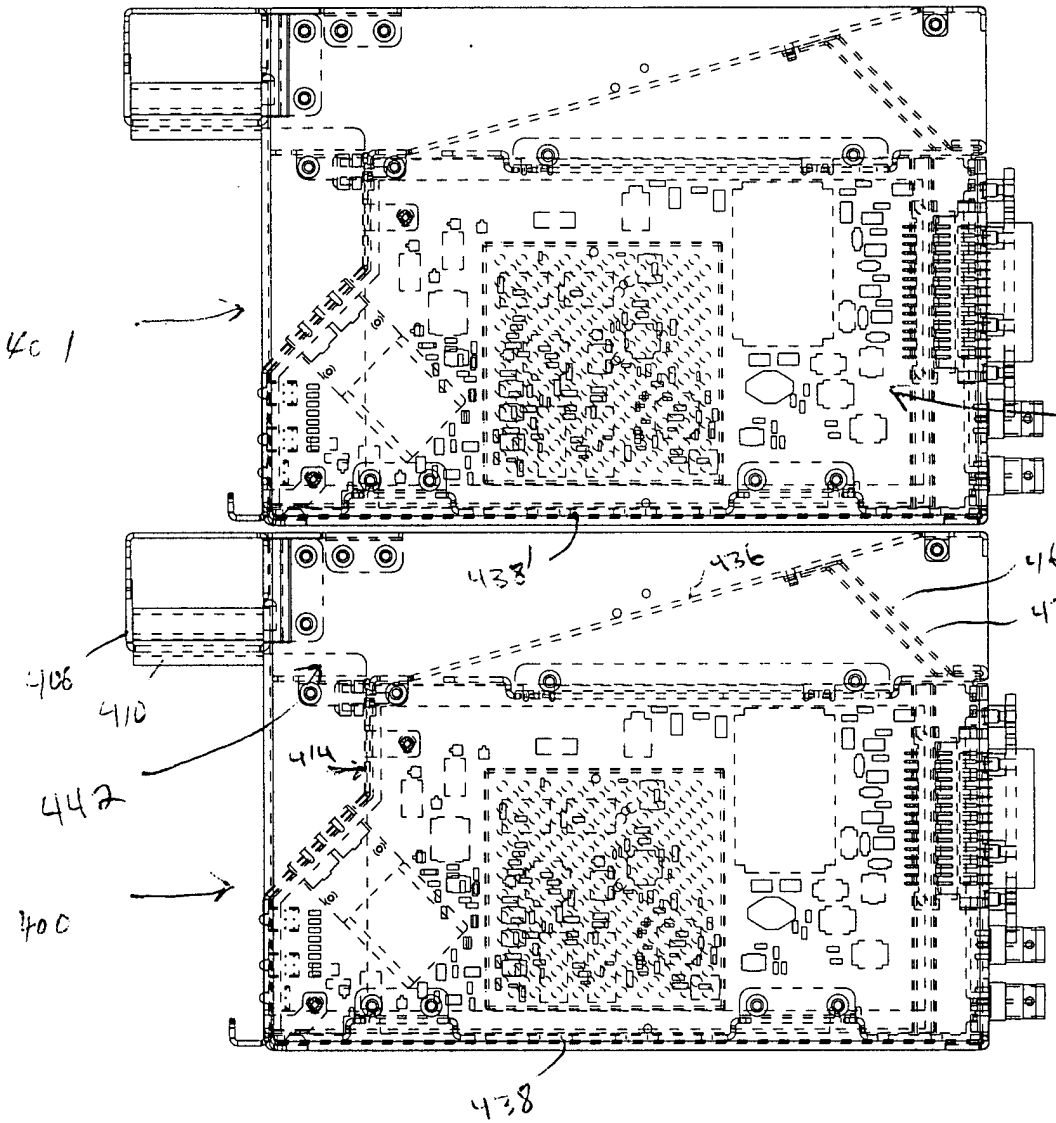


Fig. 3b

TOHO90 "E9ZE2860

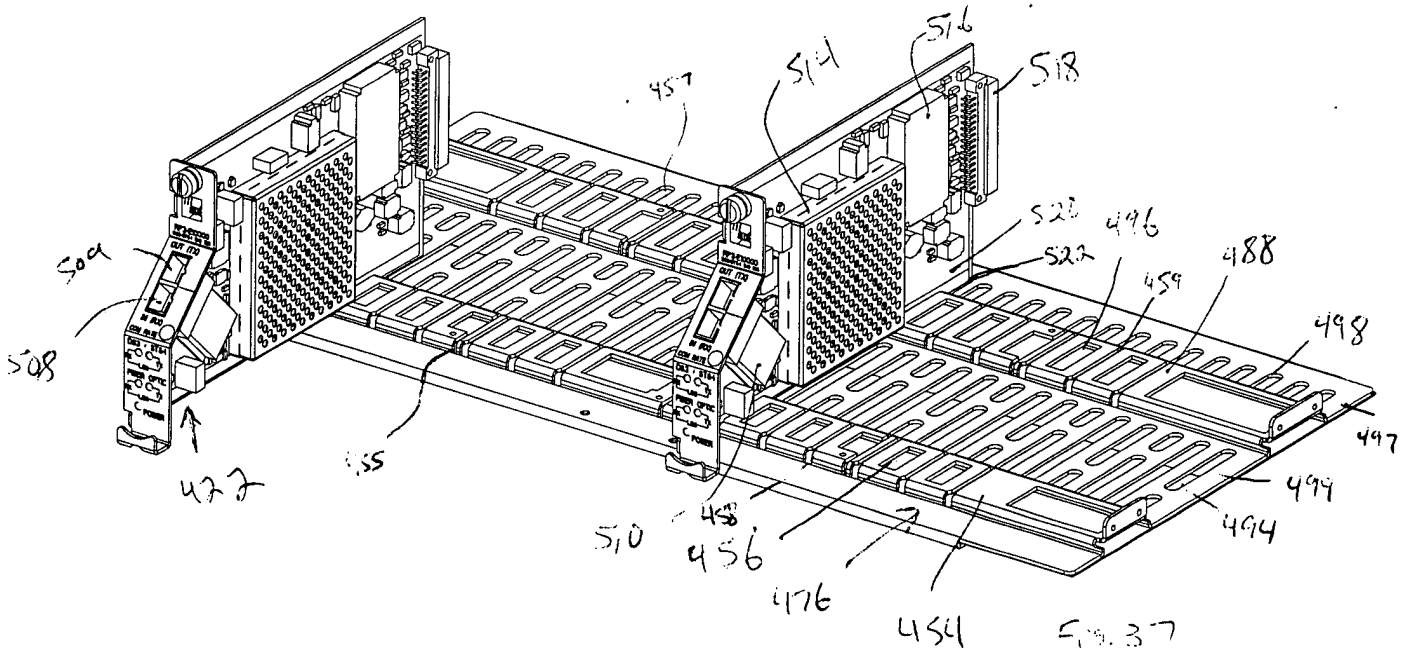


Fig. 37

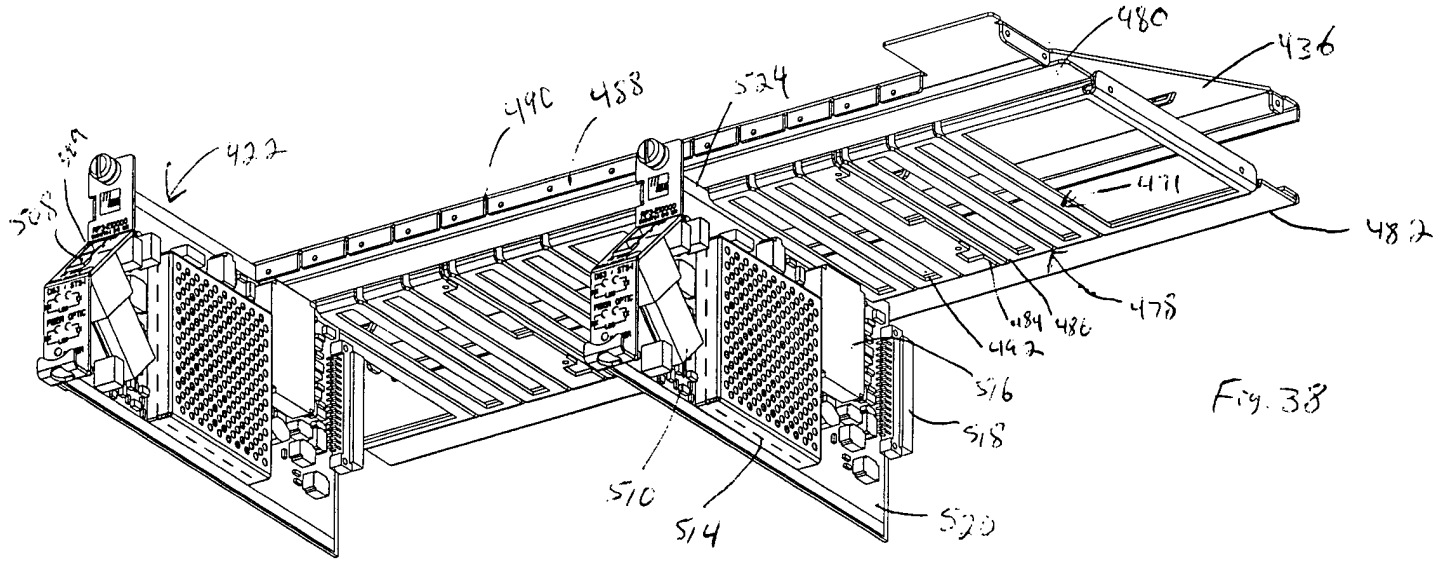
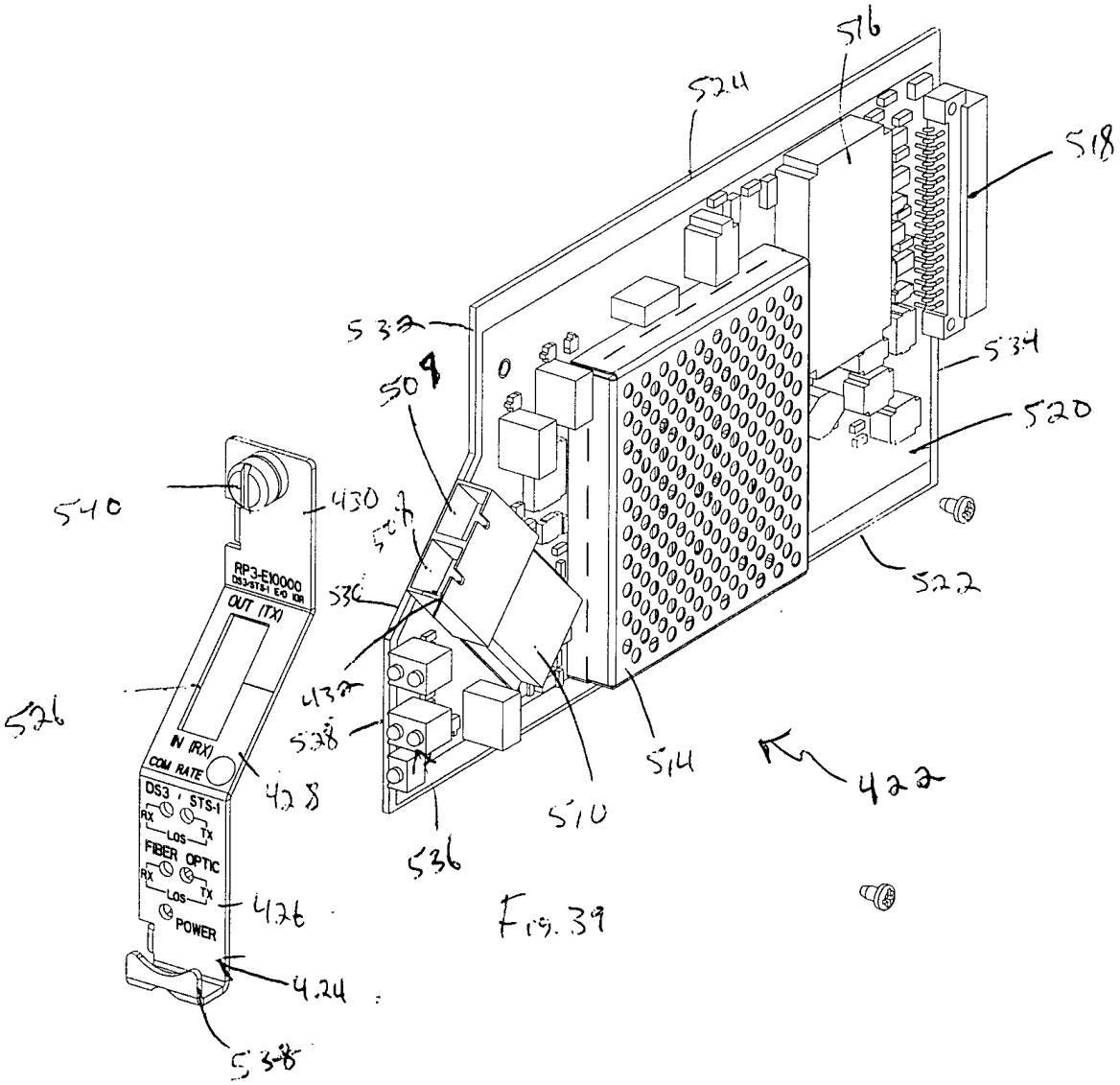


Fig. 38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424
538
RP3-E10000
DS3-STS-1 E-O IOR
OUT (TX)
IN (RX)
COM RATE
DS3 / STS-1
RX
LOS
TX
FIBER OPTIC
POWER

Fig. 39

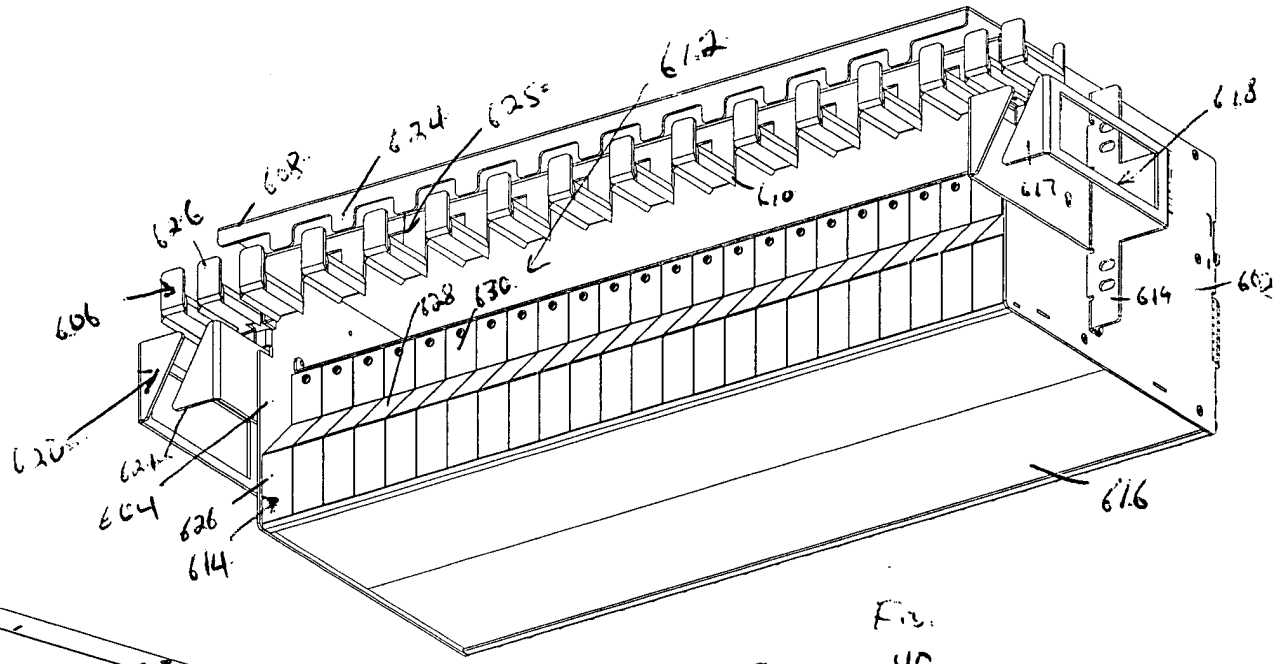
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Fig. 40

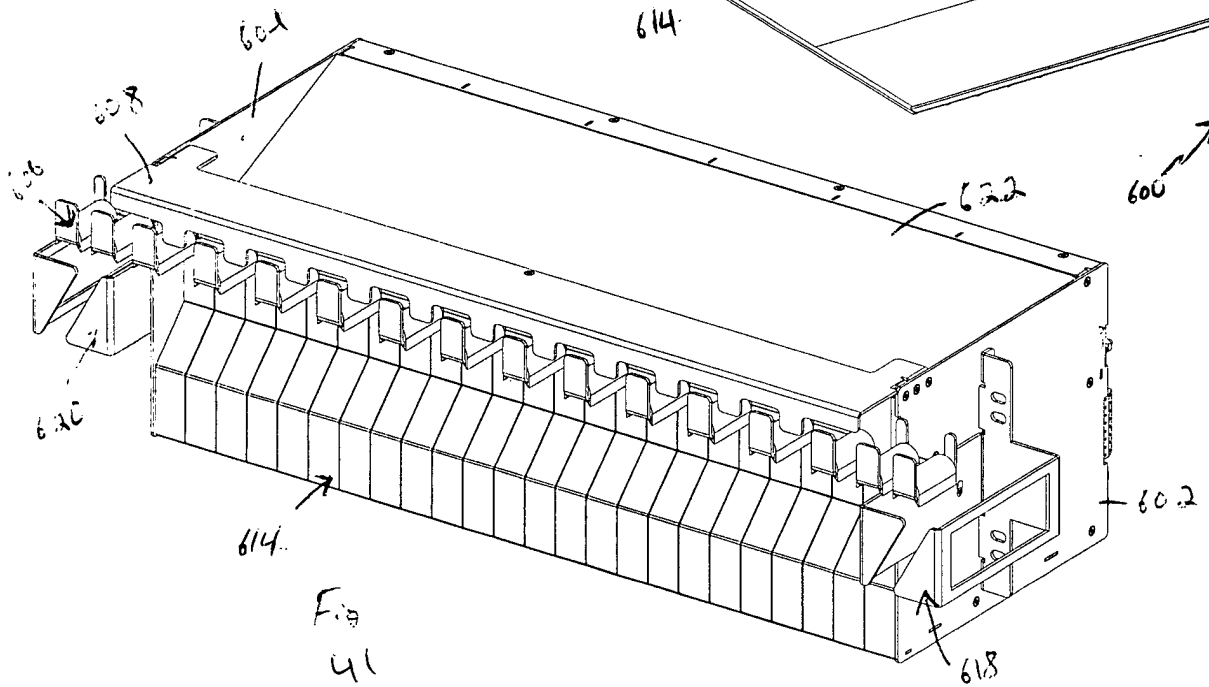
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Fig. 41

T0H090 "69262860

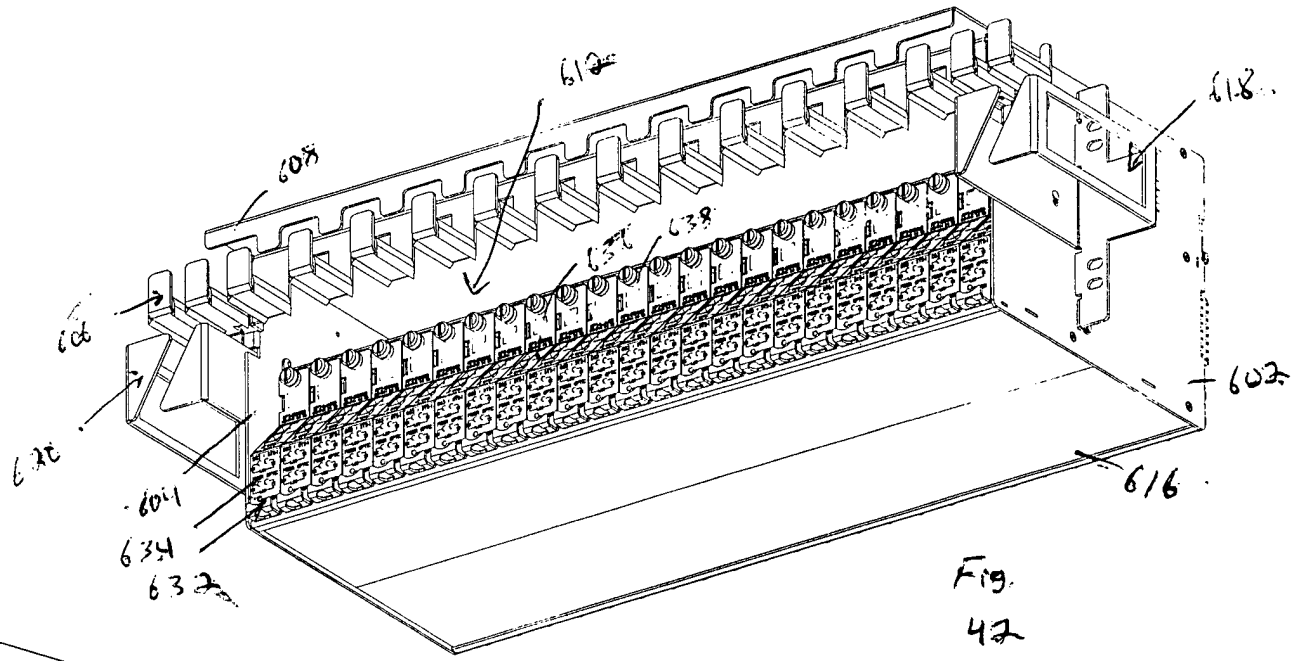

Fig. 42

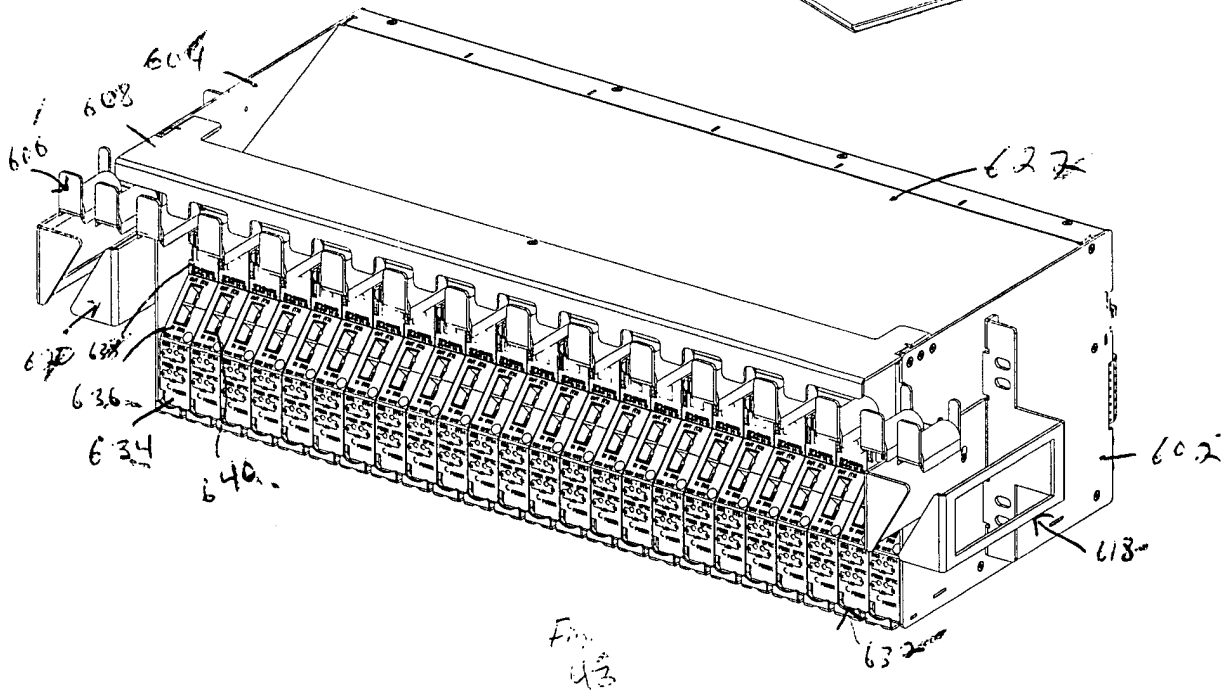

Fig. 43

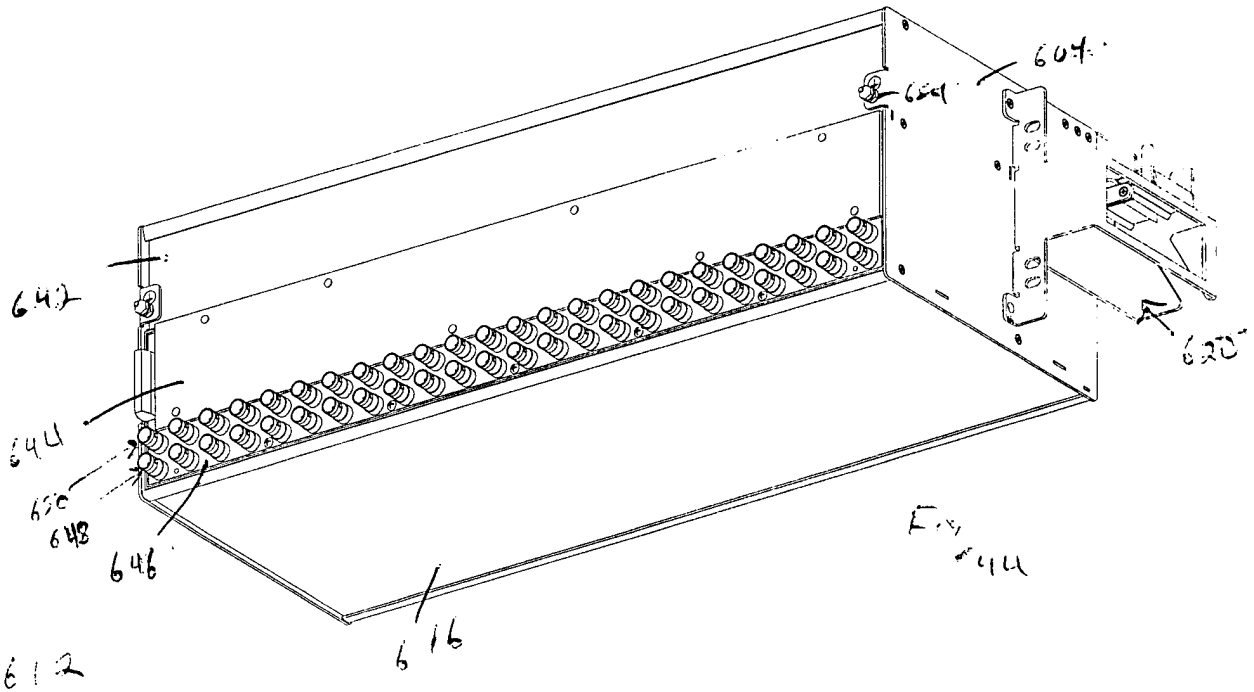
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Fig. 4A

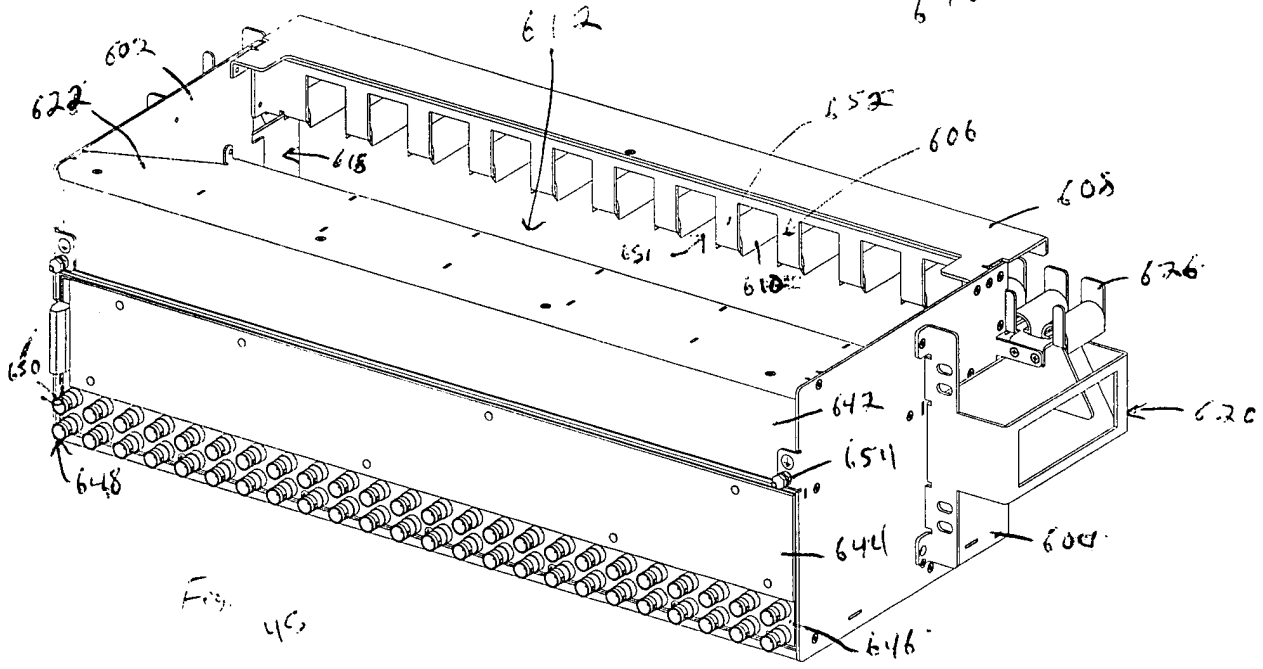
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Fig. 4C

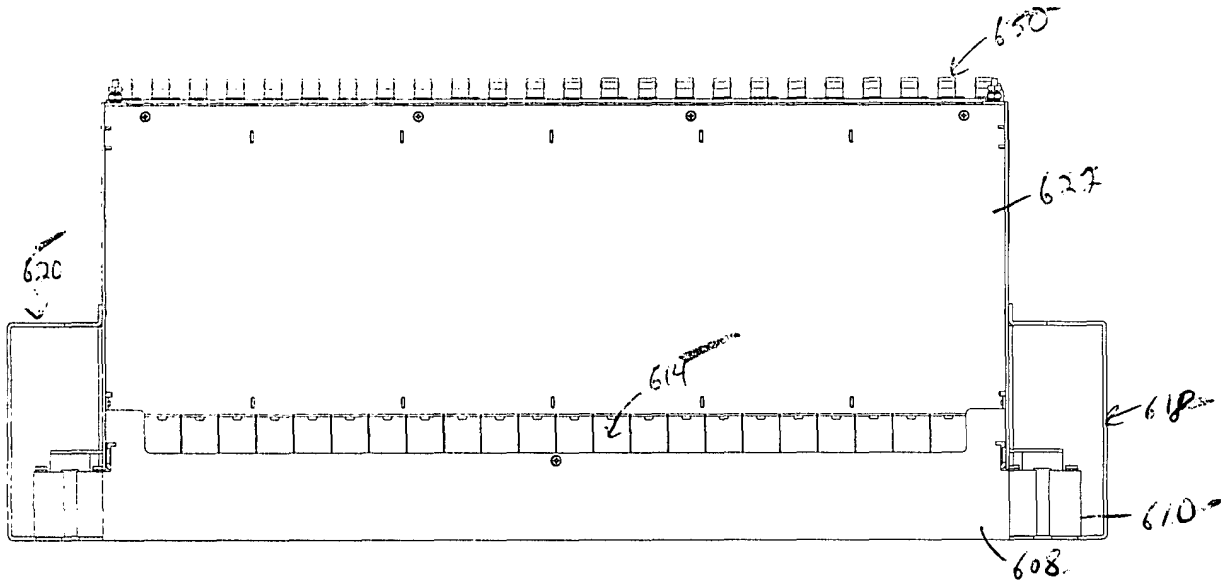

Fig. 47

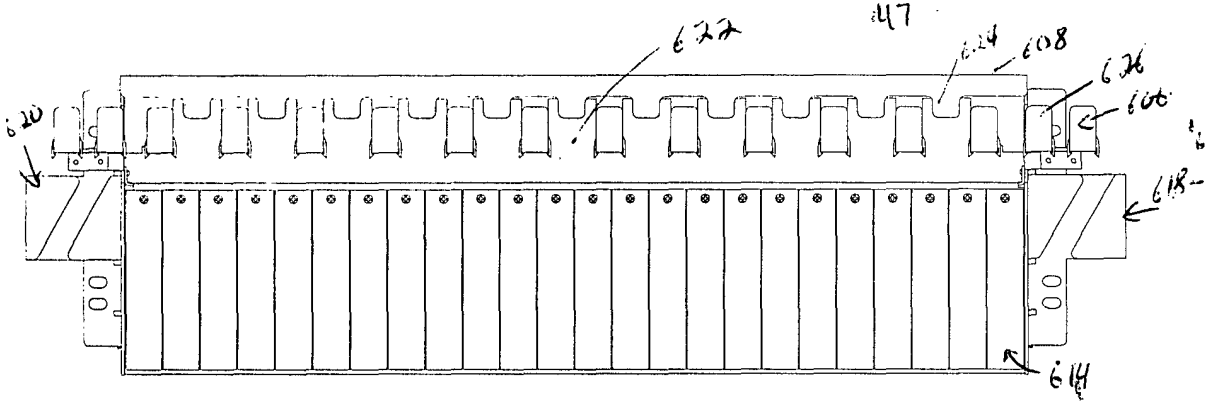

Fig. 46

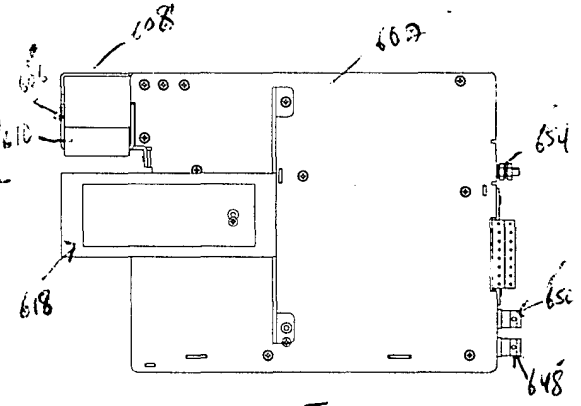

Fig. 48

TOM090 E97E7860

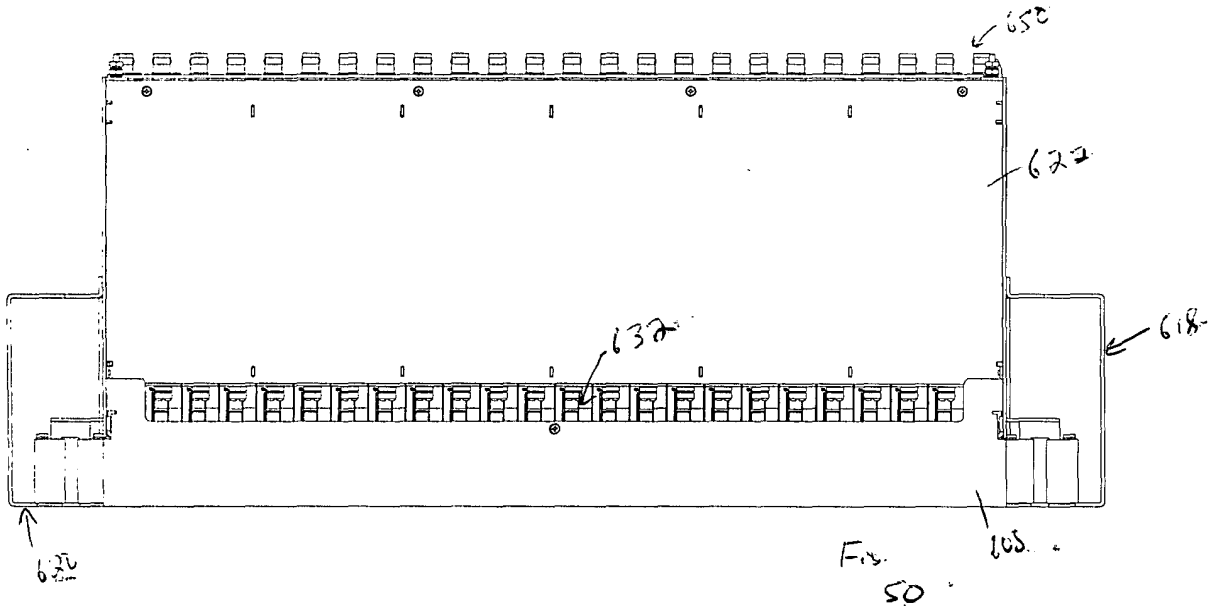

Fig. 50

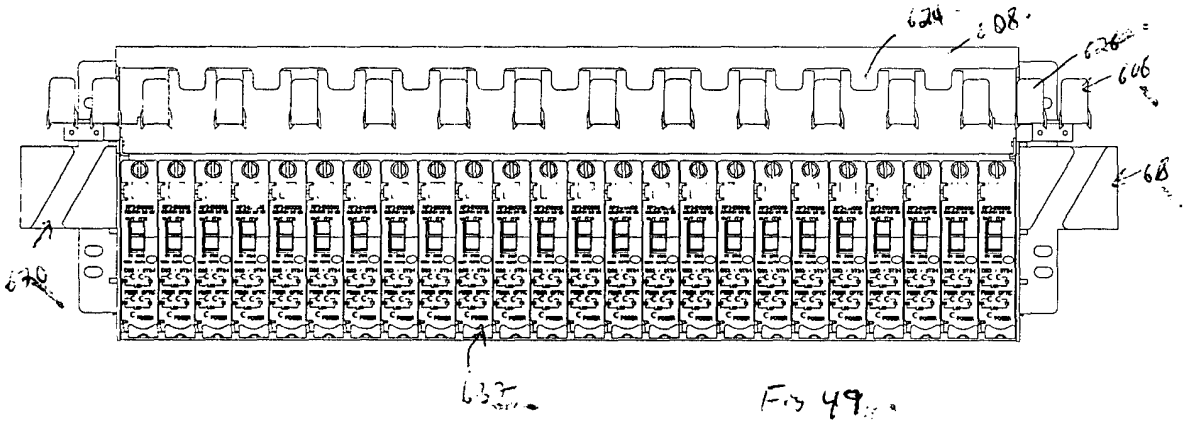

Fig 49

TOMOGEN EXHIBIT 2860

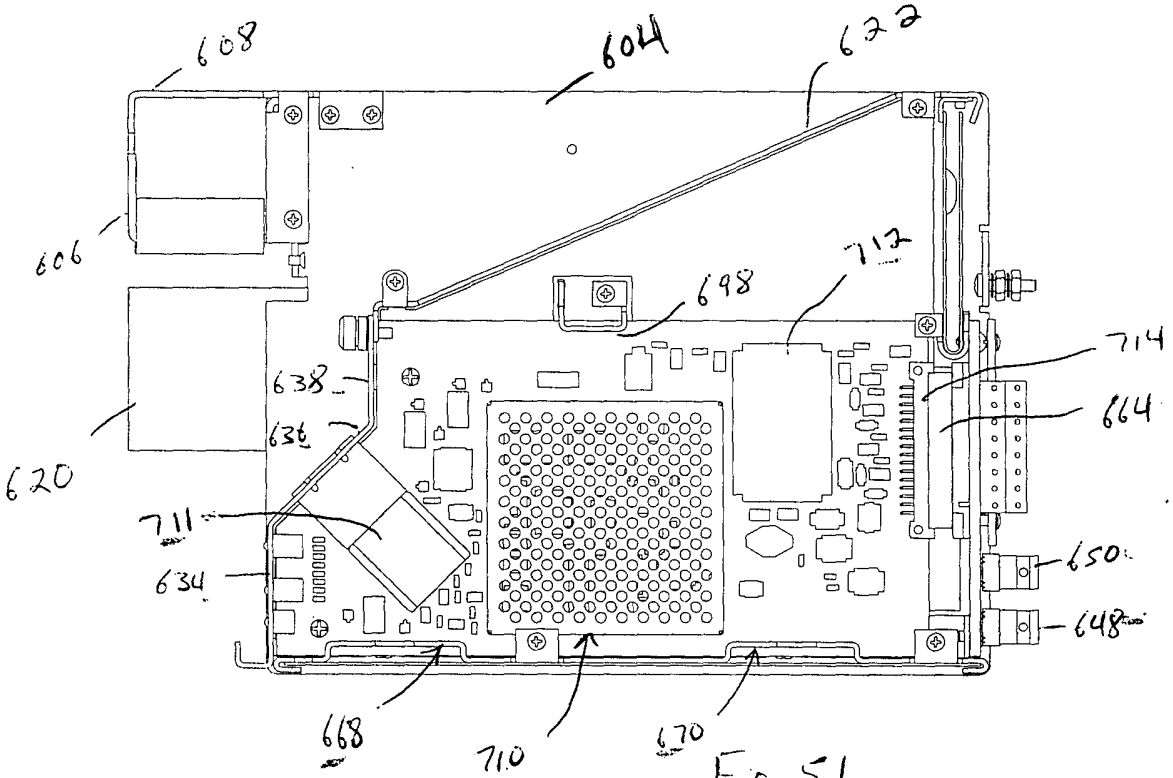

Fig. 51

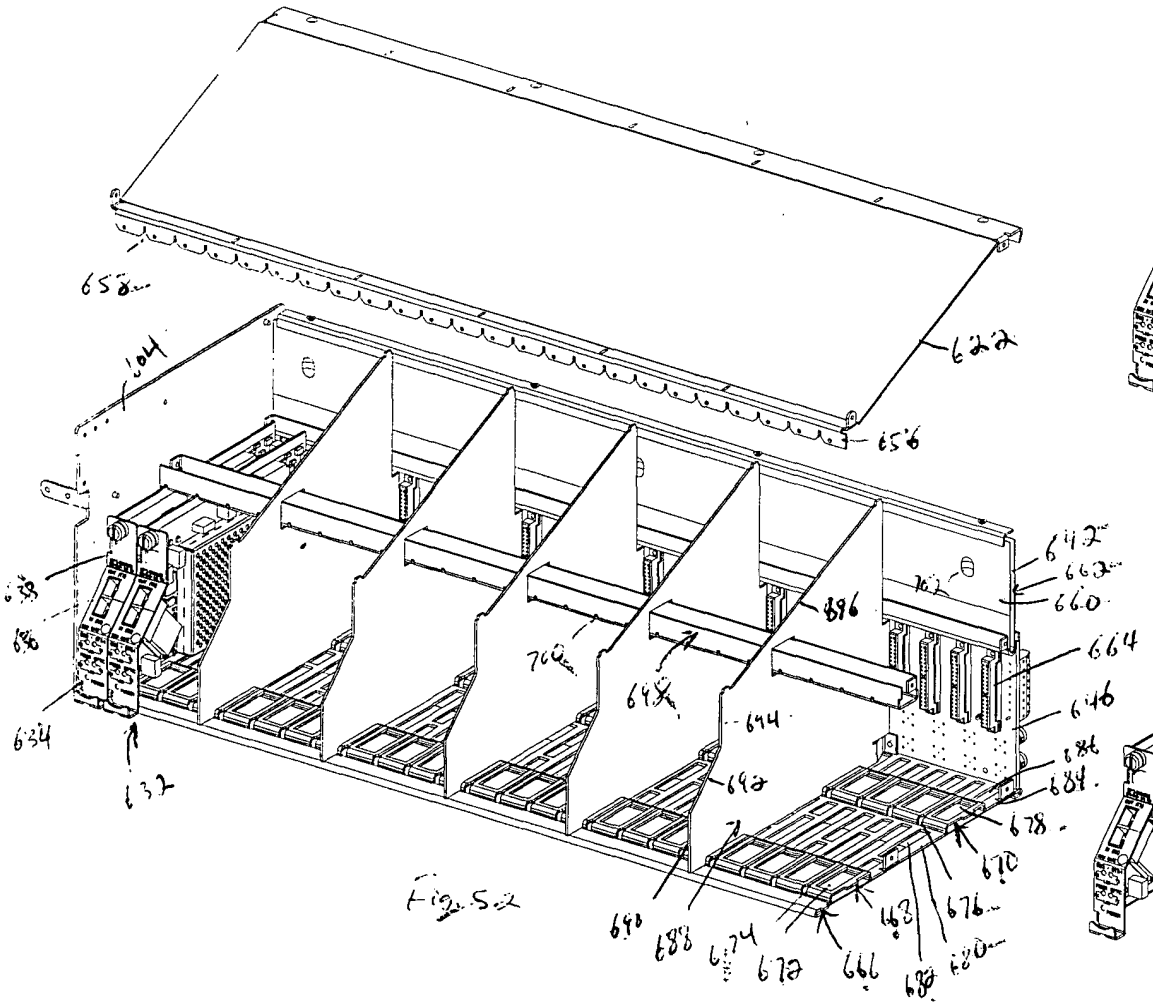

Fig. 52

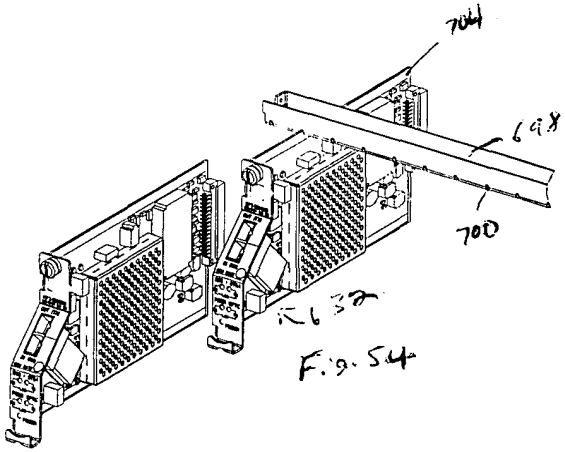

Fig. 54

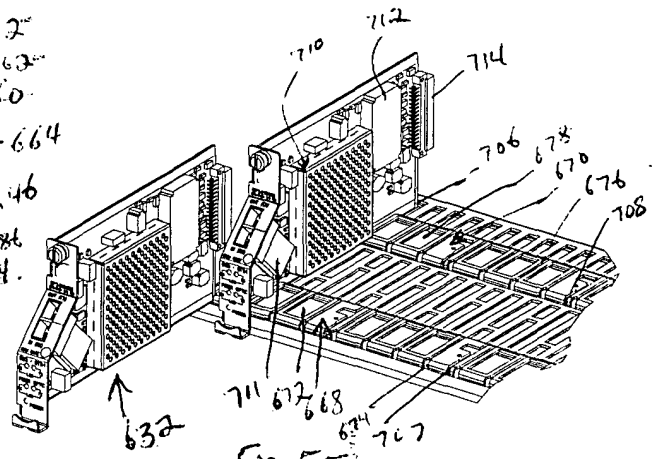

Fig. 55

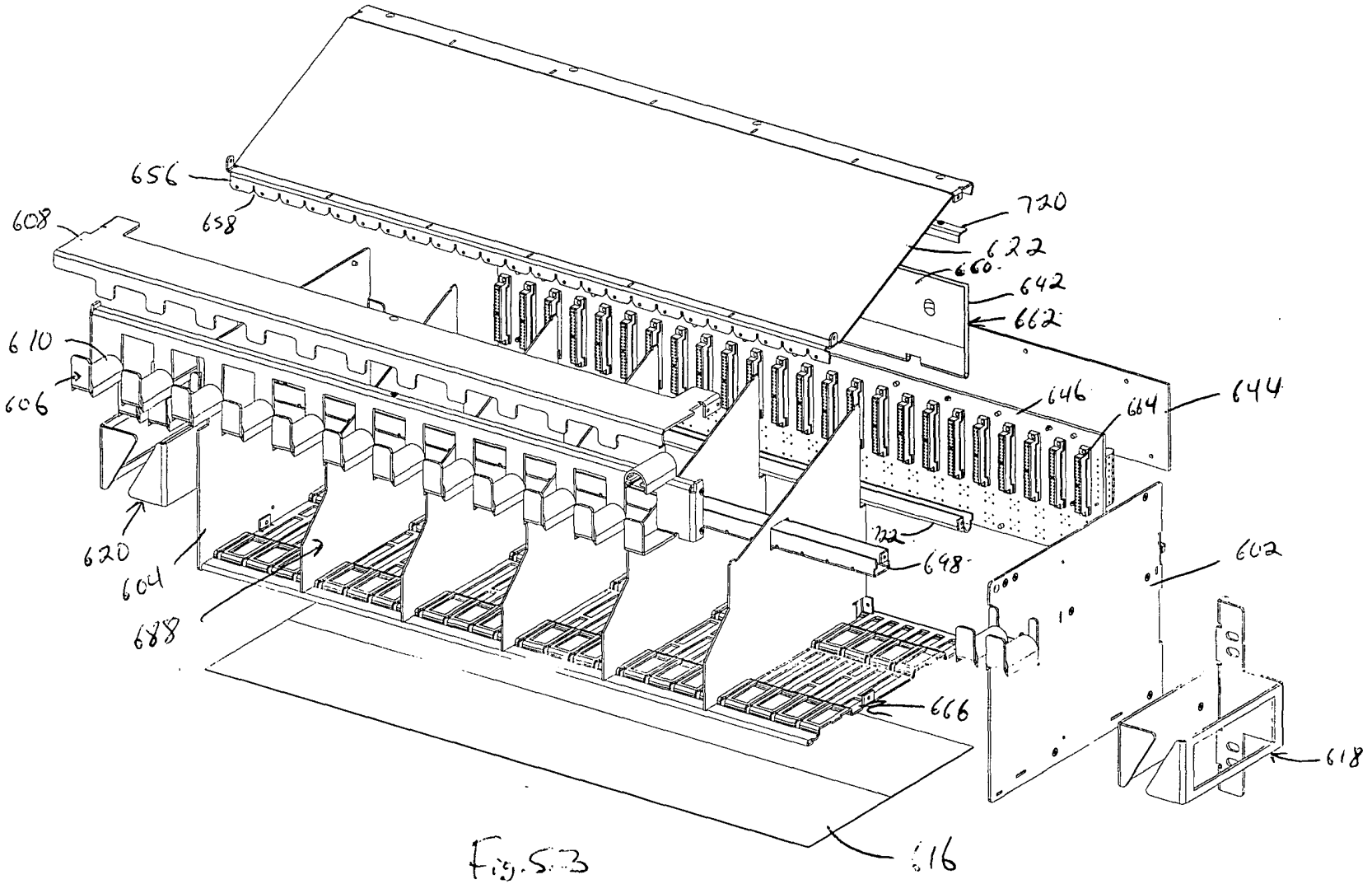
656
658
608
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Fig. 5.3

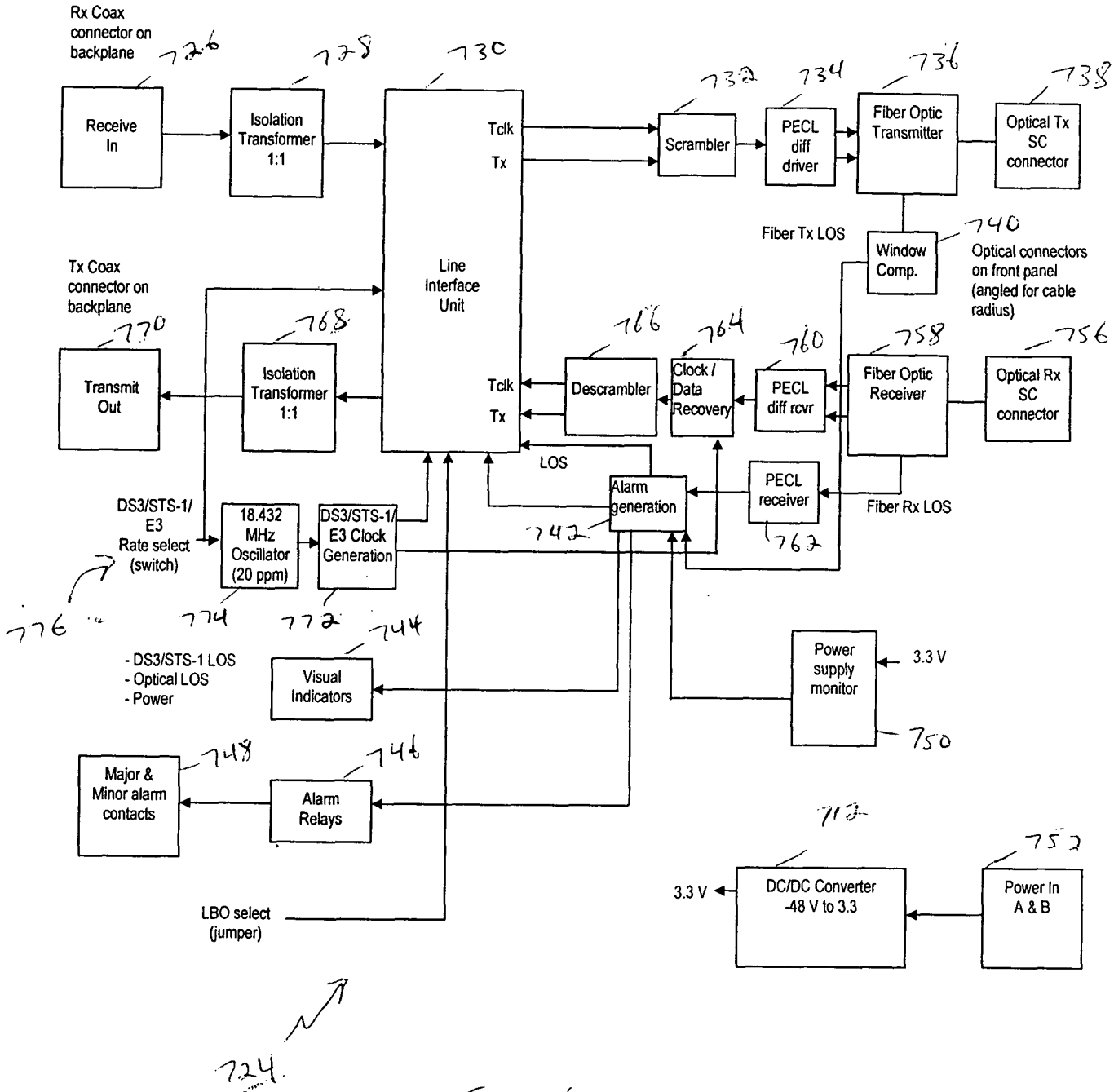
Rx Coax connector on backplane
726
Receive In
728
Isolation Transformer 1:1
730
Tclk
Tx
Line Interface Unit
732
Scrambler
734
PECL diff driver
736
Fiber Optic Transmitter
738
Optical Tx SC connector
Fiber Tx LOS
740
Window Comp.
Optical connectors on front panel (angled for cable radius)
Tx Coax connector on backplane
770
Transmit Out
768
Isolation Transformer 1:1
766
Descrambler
764
Clock / Data Recovery
760
PECL diff rcvr
758
Fiber Optic Receiver
756
Optical Rx SC connector
LOS
Alarm generation
PECL receiver
Fiber Rx LOS
742
762
DS3/STS-1/ E3 Rate select (switch)
776
18.432 MHz Oscillator (20 ppm)
774
DS3/STS-1/ E3 Clock Generation
772
- DS3/STS-1 LOS
- Optical LOS
- Power
744
Visual Indicators
Power supply monitor
3.3 V
750
748
Major & Minor alarm contacts
746
Alarm Relays
712
752
3.3 V
DC/DC Converter -48 V to 3.3
Power In A & B
LBO select (jumper)
724

Fig. 5f